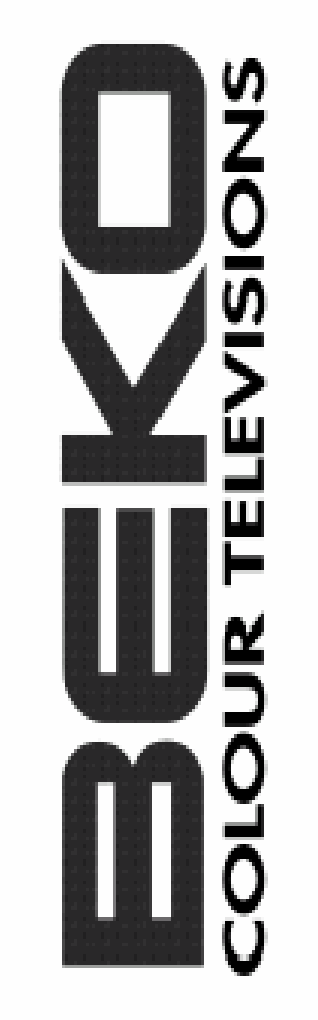


P7 PDP TV

SERVICE MANUAL

CONTENTS	PAGES
Safety Instuctions	2-5
Technical Specification	6-7
User Instruction	8-29
Back Appearance of TV	30
Interconnection Diagram	31
Block Diagram	32
Block Diagram of Power Supply	33
Service Mode	34-35
Data Sheet of important IC's and parts	36-46
Frequency list of channel	50-52
ATTACHMENT 1:	Panel Service Manual LG-PDP42V6
ATTACHMENT 2:	Panel Service Manual Samsung 42" S3
ATTACHMENT 3:	Circuit Diagrams

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. It is advised to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. Always use the manufacturer's replacement safety components. The critical safety components marked with ▽ on the schematics diagrams should not be by other substitutes. Other substitute may create the electrical shock , fire or other hazards. Take attention to replace the spacers with the originals. Furthermore where a short circuit has occurred , replace those components that indicate evidence of overheating.
3. After servicing , see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long time of period of time , unplug the power cord of the Adaptor from the AC outlet.

PDP Module is very sensitive both electrically and physically.Users, therefore, are requested to follow the "Guidance of handling color PDP Module"on the followings.

1 -Be careful not to make scratch on the polarizer.

Surface of polarizer is soft and can be physically damaged easily.Please do not touch, push or rub polarizer surface with materials over HB hardness.

2 - Keep clean the surface.

Please wear rubber glove when touch the surface of PDP screen. Please use soft and anti-static material as cleaner.

3 -Keep out of water. Water on/in the PDP may cause electrical short or corrosion. Please wipe out dry or water carefully.

4 -Prevent swift Temperature & Humidity change. Instantaneous temperature and/or humidity change can make dew or ice which cause nonconformance such as malfunction.

5 - High temperature & high humidity reduce the life-time.

PDP is not proper to be used at high temperature and high humidity. Please keep specified temperature and humidity condition.

6 - Keep out of Corrosive Gas. Corrosive gas effect the polarizer and the circuit chemically and cause defects accordingly.

7 - Electrostatic discharge can make Damage

There are electro-static sensitive components in PDP Module. Please earth human body when handle the PDP.In addition, please do not touch the interface connector pin with bare.

8 - Do not operate for a long time under the same pattern

Operating PDP for a long time under the same pattern can cause image persistence and can damage it. Please follow following guidance.

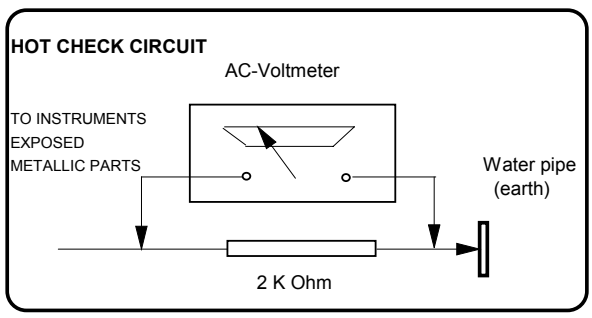
1. Turn the power off when do not use.
2. Change the pattern periodically.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver. When the exposed metallic part a return path to the chassis the reading should be between 4Mohm and the 20Mohm. When the exposed metal does not have a return path to the chassis, the reading must be infinite.

LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly in to the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2Kohm 10W resistor in series with an exposed metallic part on the receiver and an earth, such as a water pipe.
3. Use an AC voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed metallic part and check the voltage at the each point.
5. Reverse the AC plug at the outlet and repeat each of the above measurements.
6. The potential at the any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified , there is the possibility of a shock hazard , and the receiver should be repaired and rechecked before it is returned to the customer.



Important information

Read and heed the notes on safety so that no hazard to your health arises during contractual use. Errors during installation and connection can damage the device or subsequently related devices. Always keep the operating instructions within reach. Heed the warnings on the device and in the operating instructions.

• **General reference**

Before you connect the plasma display, please carefully read throught the general notes on safety and the operating instructions. Only in this manner can you utilise all functions safely and reliably.

As far as possible, keep the operating instructions together with the device so that you can use it to look up information.

Heed the warnings on the device and in the operating instructions.

Never allow children to utilise electrical devices without supervision.

• **Operation**

The plasma TV acquired by you, meets the highest quality codes and standards to be found in this business segment. A plasma display consists of a multitude of so called pixels. One pixel consists of 3 elements (red, green and blue). Even using the highest quality control practices during the manufacture of the displays, it can not be 100 % excluded that some pixels or pixel elements will be defective. These defects may appear as permanent illuminated pixels, non illuminating pixels or unstable pixels (flickering) respectively. We therefore ask for your understanding when we declare that these defects are not covered under the warranty liability. This is valid insofar that the sum of all defective pixels or pixel elements does not exceed 0,01 % of the total amount.

The brightness and contrast of plasma displays decreases with time.

Plasma displays are phosphor based and under certain operating conditions, so-called "Burn-In" effect may occur. This is in fact a degrigation of the phosphor and is a natural process in plasma technology.

Such operating conditions are:
- static images being displayed for long periods
- continues display of the same background
- use of a non full screen format (e.g. 4:3) for a long periods.

Once Burn-In has occurred it is normally irreversible.

To avoid or to reduce the Burn-In effect, please follow the listed recommendations:
- Please use moving images or continuous moving static images in full screen format (slide show) during the first 100 hours of operation
- Please use your plasma TV in a full screen format (16:9)
- In case the plasma display is used as a PC monitor, please use moving images
- Always switch the screen off, if it is not in use
- Decrease contrast and brightness as much as possible
- If possible display images with maximum colour depth and scale

Certain conditions may cause a humming noise in the displays electonics. This is usually caused by the mains power supply having different ground wires. One remedy for solving this problem is to insert a filter between antenna cable and antenna input. These filters are available at all specialised trade outlets.

If the plasma display is connected to an external antenna, it has to be grounded to protect against electrical hazards and static discharges. The grounding must conform and be in accordance with the actual regulations in force.

• **Environmental conditions**

Never operate the plasma display under environmental conditions which differ from those of the technical data. Divergent conditions can lead to endangerment, fire or breakdown of the device.

Protect the plasma display against moisture. This pertains to permanent high humidity, the proximity ta water, water drops and water splashes as well as rain. Do not place any water-filled containers (e.g. vases) on the device.

Protect the device against heat. Avoid the proximity, to fire, heating devices, ovens or permanent exposure to direct sunlight.

Protect the display against heat accumulation. Do not cover the ventilation slots. Maintain a distance of at least 10 cm above and below the ventilation from sides 4 cm from rear 4 cm slots as well as laterally to furniture and to the ceiling. Do not furnish the device with curtains.

The display is designed for mounting in landscape format on walls or installations.

• **Mains connection**

The mains input and the mains switch are located on the rear side. The mains input is located on the upper right and the mains switch is placed in the upper middle. For safe disconnection of the display from the mains voltage, the mains switch is to be turned off and the mains cable is to be removed from the mains input module.
Connect the plasma display only to a socket with earthing contacts installed according to regulations, and whose main voltage conforms with the device's technical data. See to it that the mains plug and the socket are accessible at all times. Install the mains cable in such a fashion that nobody can get caught in it. Use only the supplied mains cable. Protect it against damages, and do not make any alterations to it. Never use a damaged mains cable.

- **Signal inputs**

  Always turn the plasma display and the signal source off before you establish a connection between both devices.

- **Disturbances**
  In the event of damages to the mains cable or the device, immediately pull the mains plug from the socket.
  Under no circumstances should you attempt to open and/or to repair the device yourself. Instead, contact our Service Hotline or another suitable professional workshop.

- **Batteries**
  Batteries can be life-threatening when swallowed. That's why you should safeguard batteries from the reach of small children. Immediate medical assistance should be utilised if a battery has been swallowed.
  Always take the exhausted batteries out of the remote control immediately, since these leak and can cause damage as a result.
  The enclosed batteries may not be charged or reactivated by other means, not taken apart, thrown in fire or short-circuited.

TO FULLY DISCONNECT THE TV, SWITCH OFF THE MAINS SOCKET AND REMOVE THE POWER PLUG.

Exhausted batteries do not belong in household waste. The batteries must be disposed of at the collection points provided for this purpose.

- **Cleaning and maintenance**
  Before cleaning, turn the device off, and pull the mains plug from the socket. Wait a few minutes so that the capacitors in the device can be completely discharged.

  Use only a slightly dampened, soft cloth for cleaning. You should avoid chemical solvents and cleaning agents, because these can damage the surfaces.

- The plasma display generates high voltage internally for the gas discharge. Turn the device off and pull the mains plug from the socket during installation, maintenance and repairs. Wait a few minutes so that the capacitors in the device can be completely discharged.

- In case foreign elements such as water, liquids, metal parts, etc. get into the plasma display, pull the mains plug out immediately. Never attempt to touch anything inside the device with any kind of objects. The danger of an electric shock or accident exists.

- Pull out the mains plug immediately if smoke, unpleasant odour or unusual noises are emitted from the device. Also proceed in the same manner if the display is no longer able to present an image after being turned on or during operation. Never attempt to continue operating the display in this condition.

- In the event of lengthy absence or during thunderstorms, pull the mains plug from the socket, and pull the house antenna socket from the antenna jack.

- Never plug-in or pull-out the mains plug with wet hands. Never operate the mains switch with wet hands.

- Utilise only the supplied mains cable. Protect it against damages, and do not make any alterations to it. Never use a damaged mains cable.

- The plasma display has a glass surface. Should the device be subjected to excessive loading (e.g. through shock, vibration, bending and heat shock), the glass surface can break. Do not subject the glass surface to any pressure or shock. Should the glass be broken, immediately pull the mains plug and do not touch the broken glass with bare hands.

- When the plasma display has been switched to the stand-by mode it is still connected to the mains. You must switch the mains switch into the 0 position or pull the mains plug from the socket for complete disconnection.

- For ergonomic reasons it is recommended to avoid using red and blue fonts or symbols on dark backgrounds. Such a display causes poor readability due to the lower contrast, and prematurely fatigues the eyes. Therefore, please use high-contrast displays as much as possible, e.g. black font on a white background.

- During the connection of external laudspeakers, pay attention to the loudspeaker output technical data. In the event of insufficient dimensioning of the loudspeaker, the loudspeaker and/ or the built-in amplifier can be damaged.

- Packaging and packing resources which are no longer needed are able to be recycled, and should always be turned in for recycling.

- Place the carton upright with the underside on firm ground. You will recognise the top side by the direction of the arrowheads on the longitudinal side

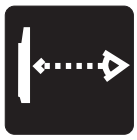
- The plasma display may only be mounted on vertical (plumb) walls by means of the wail mounting unit. Before beginning the mounting, make sure that the display is turned off and the mains cable and signal cable are unplugged. The backgraund has to be firm and structurally able to carry a load. Appropriate materials are to be utilised for varying wall superstructures, such as wooden walls or hollow-space walls. If there's any doubt, contact your responsible sales or service department.

Important notes on safety!

Your safety and the safety of others is important. Please, therefore, ensure you read the Safety instructions **before** you operate this television.

Safety instructions

Read all the safety instructions before first use of your TV.



- Position the television so that direct light does not fall on the screen. Excessive light will cause a washed out effect.

- Position the power supply lead and other leads so that they are not likely to be walked on or pinched by things placed on or against them.

- Do not place objects filled with liquid such as vase or flower pot near the television.
- Do not expose the TV to dripping or splashing of liquids.
- Do not place naked flame sources such as lighted candles on the TV set.

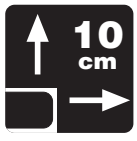
- Make sure that no naked flame sources, such as lighted candles, are placed on top of the appliance.
- Do not place the television near heat sources such as radiators, ovens, stoves, etc.

- Do not push, hit or screw the screen of your product.

- The heat built up in the set escapes through ventilation holes, so do not cover the set by drapes, clothes etc. that may block air circulation. Do not place the television on carpet or soft furnishings.
- Never let children push anything into the holes or slots on the case.

- Clean the TV Screen using a slightly damp cloth or chamois leather. Never use abrasive cleaning agents like liquid or aerosol cleaners.
- Remove the mains plug from the socket outlet while cleaning.

- Never apply pressure on the screen when cleaning.
- Never put your screen on hard objects. Your PDP screen may be damaged.



- If you wish to place the television on a shelf or in a wall unit always ensure there is a minimum air gap of 10 cm around the top, sides and rear of the television, to assist ventilation.

- Your TV set is designed to operate with mains voltages 230V AC; 50Hz. Do not connect your TV set to power sources other than the mains supply.
- If you don't use the television for a long period, please remove the mains plug from wall socket outlet.
- Your TV set is designed as a CLASS I apparatus, the TV set has to be connected to a mains socket outlet with a protective earthing connection.
- To fully disconnect the TV, the mains plug is used as a disconnecting device and therefore shall be readily operable.

PC FORMATS	DOS Modes 640 x 400 and 720 x 400 VGA (640 x 480) @ 50Hz - 90Hz repetition rate SVGA (800 x 600) @ 50Hz - 90Hz repetition rate WVGA (848 x 600) @ 50Hz - 90Hz repetition rate XGA (1024 x 768) @ 50Hz - 90Hz repetition rate
IMAGE FORMATS	4:3, 16:9, auto, zoom, letterbox, subtitle
INPUTS/VIDEO	Mini DIN.....Y/C / Hi 8 (PAL, SECAM, NTSC) Cinch.....CVBS Video In (PAL, SECAM, NTSC) SCART 1 .....CVBS, RGB (PAL, SECAM, NTSC) CVBS output SCART 2 .....CVBS, RGB (PAL, SECAM, NTSC) CVBS output RF Tuner.....VHF/UHF/HYPERBAND for terrestrial antennas or cable networks (47MHz to 861 MHz) (PAL, SECAM)
PC	DVI (D).....VGA/SVGA/WVGA/XGA Digital (DVI)
AUDIO INPUTS	Y/C (S-Video) - CVBS SCART 1 SCART 2 PC
OUTPUTS	Cinch.....L/R Audio Output loudspeaker.....2 x 7W sine @ 4 Ω Cinch.....CVBS Output
CONTROL	On-Screen Display Menu .....24 languages IR remote control
VIDEOTEXT	TOP FLOF.....800 pages of memory control with special keys on the remote control
OPERATING VOLTAGE RANGE	170V - 240V AC alternating voltage 50Hz
POWER CONSUMPTION	275 W

Special Features

- 42'' PDP VGA Panel
- 852x480 pixels
- 16,722,216 color (8 byte)
- Available for Cable Channels (A decoder may be required)
- 3000:1 contrast ratio
- 2x7 W Stereo sound (With detachable speakers)
- 800-Page Teletext Feature
- PIP (Picture in Picture) Feature
- Wide angle perspective
- SCART socket, AV Socket and external sound system connection
- S-VHS and Cinch inputs for S-Video connection
- DVI connection
- PC connection
- AVL – Automatic Volume Limiting
- ATS – Automatic Tuning System
- Programmed power off
- Graphic equalizer
- Color Transfer sharpness feature (CTI)
- Black-White Transfer sharpness feature (LTI) and picture sharpness
- Compound Filter (Digital Comb Filter) Feature for clear images
- On screen viewing of all control commands, program numbers and additional features
- Manual Fine Tuning
- 100 Program memory
- Infrared Remote Control
- Child lock (this feature works like a Panel Lock)
- Ability to watch NTSC broadcasts through SCART input
- East handling through an advanced menu system. Abiltiy to choose from 24 languages.

Connection of Mains Cable

Always utilise the enclosed mains cable in order to guarantee optimal image quality.
First of all, insert the main cable into the input panel, and only thereafter into the socket.

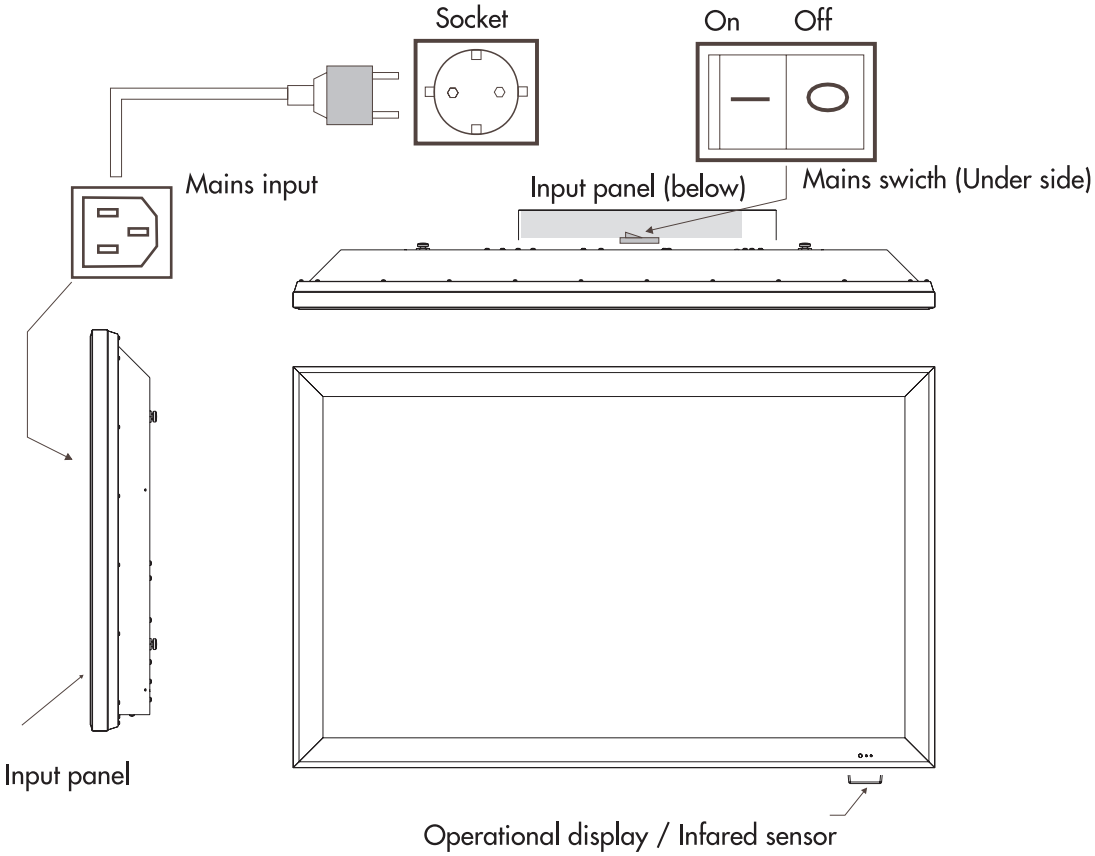
- Never utilise a damaged mains cable!
- Use only sockets with a protective eathing conductor system to ensure safe operation.

A line filter and switches for sabilisation of the supply voltages ensure safe operaion within normal mains voltage variations. In case the mains voltage lies beyond the stated limits, please contact your responsible sales office. In the event the mains cable cannot be utilised on account of differing standards in your country, please see to it that you utilise a mains cable commensurate with the country-specific standards which are listed in the following:

- USA UL
- Germany VDE
- Canada CSA
- Switzerland SEV
- Great Britain BASE/BS
- Japan MITI

This list is not complete. For reasons of safety it may be necessary to select a different safety standard.

At any rate, the mains cable has to consist of three wire conductors of at least 10A/0.75 mm2 in order to avoid an accident as a result of electric shock. One of the three wires is impemented on both ends of the cable as an earthing contact connection.



Turning On the Plasma Display

You can only control your plasma display with the remote control when the device is in stand-by mode. Switch the mains switch in the input panel into Position I. The operational display on the front side of the display screen lights up red.

• Press a numeric button or the **Program Up / Program Down** button on the remote handset or **PR+ / PR-** or **MENU** button on the front panel of the TV to switch the TV on. The standby indicator turns into green. The picture will appear after a few seconds.

Press the **Standby** button to switch the TV to standby. The standby indicator turns into red.

• The plasma display is always connected to the power supply network in stand-by mode. You must switch the mains switch into position 0 and pull the mains plug from the socket for complete disconnection.
• Display has a mains adapter, and can be operated with a supply voltage of 230V AC and 50HZ.

Note 1: Your TV will go to stand-by mode in five minutes if there is no broadcast signal.

Note 2: Your TV is equiped to operate with front panel buttons, "MENU", "SOURCE", "▼ PROG ▲", "◄ VOL ►" in case your R/C is broken or the batteries are exhausted.

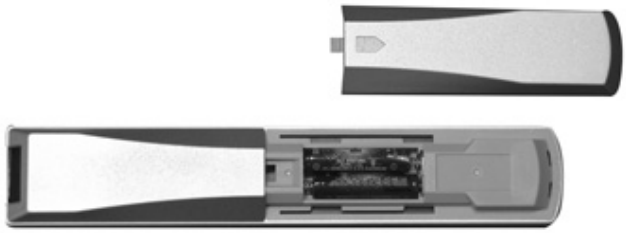
The batteries

Remove the back cover to reveal the battery compartment and make sure you insert the batteries the right way round.

Suitable battery types for this remote are UM-4, IEC R03 or AAA 1.5V.

Do not combine a used, old battery with a new one or mix battery types.

The performance of the remote control will deteriorate beyond a distance of 8 metres or outside an angel of 30 degrees from the centre of the TV.



Operating Modes

⚠ CAUTION

Operating mode at the beginning of utilisation

Due to the functionality of the Plasma-TV please pay attention, that particularly during the first 100 to 150 operation hours the display has to operate with a full screen format adjustment (see submenu Display, Picture Format). This prevents the formation of brightness differences in the display areas. As an alternative to the picture format 4:3 the adjustment Video NLS should be selected.
Further on, in order to prevent the formation of permanent shadows in the displayed image, please avoid to show fixed-images of any kind (PC mode, teletext pages, Photo CD image etc.) during the first operation hours. If the Plasma-TV will be used as a PC monitor, the utilisation of a screensaver is recommended.

PC mode

For optimal image reproduction, we recommend the 848 x 480, 640 x 480 or 720 x 400 pixel resolutions. The 848 x 480 pixel resolution corresponds to the display matrix, and offers the best image reproduction. You can obtain the driver for this resolution on the Internet pages of mont of the well-know manufacturers of graphics cards.
In contrast to applications with CRT monitors, with flat displays it is not necessary to select a high image refresh for a flicker-free presentation. A refresh of 60Hz is recommended.

Video recorder mode

The utilisation of Y/C (S-Video) inputs is recommended for enhancement of image quality - if your recorder offers playback in Y/C (S-Video) format.

DVD player mode

The application of the RGB operating mode, which can be connected to the SCART 1 input, is recommended for optimal utilisation. In case your player does not offer this operating mode, please use the Y/C (S Video) signal mode.

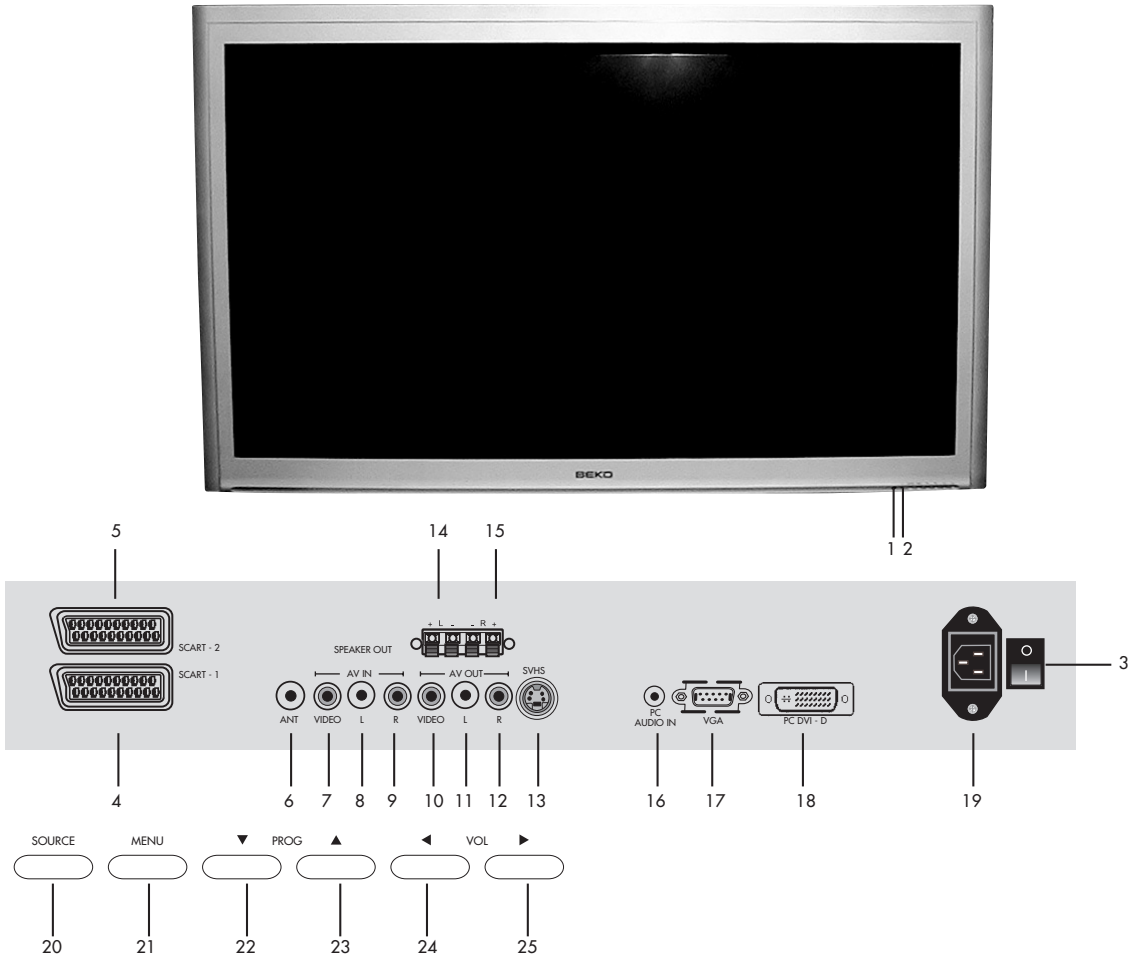
Image sticking

The manufacturer would like to point out to you that during lengthy viewing of freeze pictures (e.g. PC playback), the image is still slightly visible in the full mask for a few minutes during the subsequent playback of a different source. This is known as "image sticking" This "vanishing" residual image is caused by the system, and does not represent a flaw. Therefore it can not be considered as a case for warranty claim.

Video cable

A high-quality 75Ω coaxial cable should be utilised for the connection of the video signal. Poor quality signal cable can result in strong disturbances and formation of shadows in the displayed image, as well as exceeding the permissible EMC level. The mechanical interlocks of the individual plug-and-socket connectors are necessary for perfect and safe operation of the device.

Control Unit

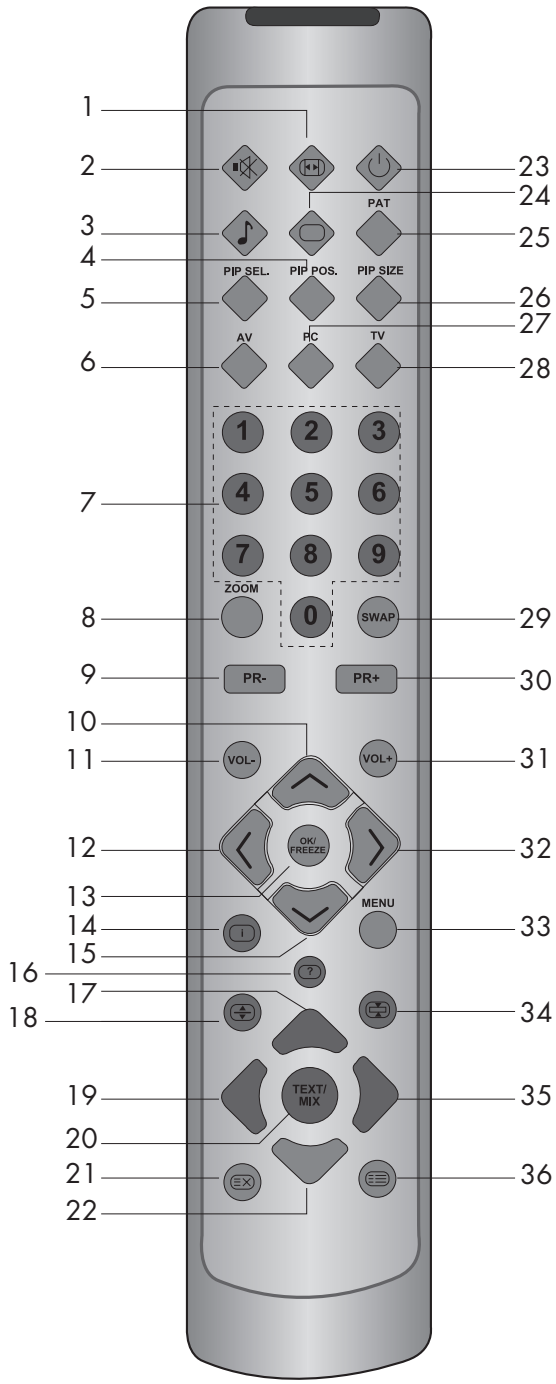


1. Remote control
2. Stand-by
3. Power on / off
4. Scart 1
5. Scart 2
6. Antenna input
7. Video input CINCH connector
8. Audio RCA input (L)
9. Audio RCA input (R)
10. Video output CINCH connector
11. Audio RCA output (L)
12. Audio RCA output (R)
13. S-VHS
14. Speaker out (L)
15. Speaker out (R)
16. PC sound input
17. VGA
18. DVI-D
19. Power Input
20. Source Select
21. Menu button
22. Program down
23. Program up
24. Volume down
25. Volume up

Please note

- Do not use Video RCA and S-Video connections at the same time, otherwise they will effect the picture each other.
- RGB inputs from scart will give you better picture quality.

Remote control



1. Picture Format choice button
2. Temporary sound mute button
3. Equalizer selection button
4. PIP Position choice button
5. PIP/PAP On-Off button
6. AV modes select button
7. Numeric buttons
8. ZOOM mode choice button
9. Program down button (PR-)
10. Upward movement (Menu)
11. Volume down button (VOL-)
12. Left movement (Menu)
13. Confirmation and Temporary picture freezing button (Freeze) (OK/FREEZE)
14. Info / Txt index page button
15. Down button (Menu)
16. Txt Question/Answer button (Reveal)
17. Red Fastext Button
18. Teletext enlarge button (Double)
19. Blue Teletext Button
20. Teletext / Mix choice buttons (TEXT/MIX)
21. UPDATE Button
22. Yellow teletext Button
23. Stand-by On/Off button
24. Picture mode choice button
25. PAT (Picture and Teletext) Mode On-Off button
26. PIP size button
27. PC mode input button
28. TV mode input button
29. Return to Selected Program Button (SWAP)
30. Program Up button (PR+)
31. Volume Up button (VOL+)
32. Right button (Menu)
33. MENU button
34. Txt Stop Button (Hold)
35. Green teletext button
36. SUB PAGE Button

Using the TV

Turning on for the first time and Tuning

TV controls

Temporary On-Off (STAND-BY)

When you press the red (⏻) stand-by button (temporary on-off function) located on the upper right hand side of your remote control of your television when it is switched on;
indicator of your television will light red. To switch your television back on, either press the same button, any of the number buttons or one of the (PR+)/(PR-) buttons.

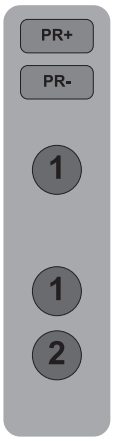
Caution!
If you are not going to use your television for a long period of time, make sure to switch it off from the main power button.

There are certain settings which you must make when setting up the television.
When you first switch it on, the Language menu appears.

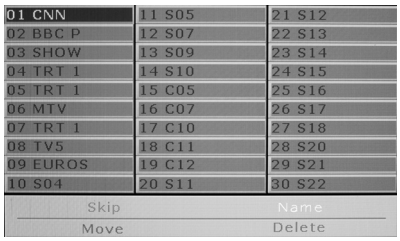
1. Select the menu language by pressing (◀) or (▶).
2. Select Country with (▲) or (▼) and then select the country where you are located with (◀) or (▶).
3. Select Station search with (▲) or (▼) and press (OK/FREEZE) to start the search.

- The automatic station search starts. This may last a minute or longer, depending on the number of television stations received.
- After the search, the station list appears. You can delete any stations which have been saved more than once. You can also move stations to a different preset position, and change or enter the station names.

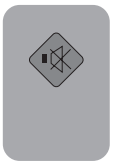
Programme selection



Press the (PR+)/(PR-) buttons on your remote control, or by selecting a numeric button in order to get the desired channel on your television. In order to select a program whose number is greater than 9, you can use the numeric buttons, punching in the desired numbers as required. For example, to select program 12, press the numeric buttons 1 and 2 one after another.



Mute



To temporarily mute the sound of your television, press the (🔇) button, where the (🔇) on screen display will appear on screen as an indication of the application.
When you press the same button again, the sound will return. During mute, when you press the (VOL-) button the volume will decrease and automatically get out of the mute function, if you press the (VOL+) button the volume will increase and automatically get out of the mute function.

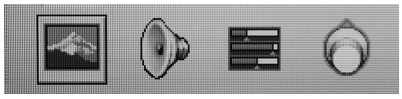
Return to Selected Button Program (SWAP)

If you wish to return to the previous program that you were watching then you have the ability to return with a single function, by pressing the (SWAP) button. Regardless of whether you are in AV, or any other program, by using the SWAP function allows you to swap between the program you were watching and the last selected program. If you hit the same button again, you will return to the program or AV you were watching before.

PR 01 ➡ SWAP ***PR 11*** ➡ SWAP ***PR 01***

Control Menu

Press the (MENU) button. You will see the MENU with all the headings of the different controls on screen. The Right/left buttons (◄)/(►) enable you to move between the different control menu title where you can indicate your choice by pressing the (OK/FREEZE) or Up/down (▲)/(▼) button.
In the event that you wish to exit the application at any given stage, simply press the MENU or TV button.



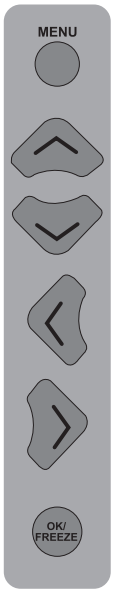
Tuning the television

You can either tune the programs automatically or manually storing them in your television.

Please Note
In the case that your television does not receive any broadcast signals for 5 minutes it will automatically go on stand-by. The 5 minute countdown OSD will be on screen.

Automatic tuning and storing of the television program channels with ATS

The ATS (Automatic Tuning System) on your television enables the automatic finding and sequencing of channels.
Sequencing is done according to the selected country channels, which broadcast Teletext and channel names; followed by all channels with Teletexts without channel names and then by channels without Teletext, to be concluded by foreign channels broadcasting Teletext with channel names.



Press the (MENU) button Press the right move button (►) to select the Adjustment menu. You can reach this menu directly by pressing the Blue (◄) button. Using the Up/down (▲)/(▼) buttons select the ATS line and press the (OK/FREEZE) button, the screen will show the ATS menu. At the Country line select the country you want to watch by using the Right-left (◄)/(►) buttons.
Afterwards press the down (▼) button to select the autoprogram heading and press the (OK/FREEZE) or the Right/left (◄)/(►) buttons. The screen will show a warning before the Automatic Tuning.

To start Autoprogram press the (►) button; the channels will be searched automatically and those with broadcasting will be saved from the first program into memory.At this point, the autoprogram warning menu appears showing an indicator that displays the present situation of the Automatic Tuning process. To stop the process at any given time, press the (OK/FREEZE) button.
After the automatic search the screen will show the Program Table. The program numbers that have been stored are reflected in the Program Table, giving you the ability to assign any program number to the channel of your choice.

To quit the station list, press the (TV) button.

Manual tuning and storing of the television channels

If you already know the Channel number

Press the (MENU) button. Press the right move button to select the Adjustment menu. You can reach this menu directly by pressing the (◀) button.

Using the Up/down (▲)/(▼) buttons select the Set-Up line and press the (OK/FREEZE) button, the screen will show the Set-Up menu. Select the program you want to Set-Up by using the Right-left (◀)/(▶) buttons or the numeric keys. Choose the system in which do a search among the system lines.

Enter the System line using the down button(▼).Here your TV can be set to one system, you can also select from (▶)/(◀) more than one systems. Move to the Band line using the down button (▼). Using the right-left (◀)/(▶) buttons on your remote control select "C" for the cable channels received through the "S" antena.

Using the Up (▲) button select the Channel line and enter the channel number by using the numeric keypad or right-left buttons. If the channel on screen is in the quality you desire and you want to store it into memory, select the Saving line with the down (▼) button.

Afterwards press the (OK/FREEZE) button, after a moment you will see a Stored sign. The channel will be stored according to the program number of your choice. In order to store other channels, simply repeat the above process. In the event that you wish to exit the Channel Settings, simply press the (MENU) button

If you do not know the Channel number

Press the (MENU) button. Press the right move (▶) button to select the Adjustment menu.

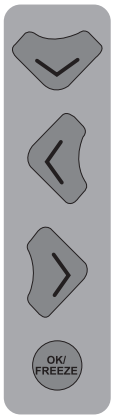
You can reach this menu directly by pressing the (◀) button.Using the Up/down (▲)/(▼) buttons select the Set-Up line and press the (OK/FREEZE) button, the screen will show the Set-Up menu. Select the program you want to Set-Up by using the Right-left (◀)/(▶) buttons or the numeric keys. Choose the system in which to do a search among the system lines. Enter the System line using the down button(▼).Here your TV can be set to one system, you can also select from (▲)/(▼) more than one systems. (option) Move to the Band line using the down button (▼).

Using the right-left (◀)/(▶) buttons on your remote control select "C" for the cable channels received through the "S" antena. Use the down (▼) button to select the Search line, and scan the channels using the right (▶) button to increase and the left (◀) button to decrease. Select the Saving line if you found the channel in the quality you desire.

Afterwards press the (OK/FREEZE) button to store into memory. For the other channels using the Program No line, select the program numbers you want and repeat the same process.

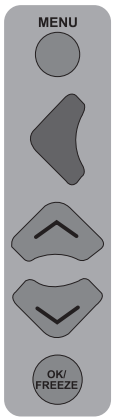
If you want to Fine Tune or name the channel you found, please refer to the concerning sections.

Fine tuning



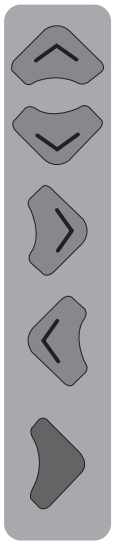
If the current channel requires fine tuning, select the Manual Fine Tuning bar by using the down (▼) button in the Manual Tuning menu. Using the right-left movement (◀)/(▶) buttons on your remote control you will have the ability to get the exact quality of tuning required. Under normal conditions you will not need Fine Tuning. Your television will automatically lock channels, which need AFC values. However, in the event that the TV transmitters do not work, then you may need to use this process. For storing the settings to the memory press (OK/FREEZE) button.

Program Table



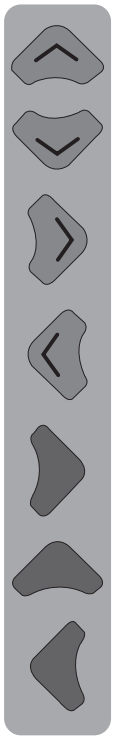
Press the (MENU) button. Press the right move button to select the Adjustment menu. You can reach this menu direclty by pressing the (◄) button. The screen will show the program table when you select the program table line with Up/down (▲)/(▼) and press the (OK/FREEZE) button.

Switching the locations of the program channels that have already been stored



Select the program you want to switch by using the Up-down (▲)/(▼) or Right-left (◄)/(►) button. Press the Green (►) colored button.
number and name will appear green. Using the Up-down (▲)/(▼) or Right-left (◄)/(►) buttons carry it to other program location you want to switch.
To finish the switching press the Green (►) button. The first channel program number indicated can be moved to the second channel program number, which in turn moves the initial channel program number that has been indicated.

Deleting a program that has been stored

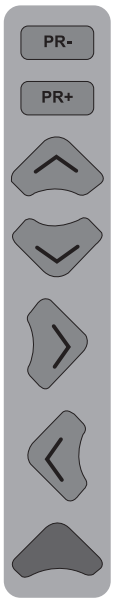


Select the program you want to delete by using the Up-down (▲)/(▼) button or Right-left (◄)/(►) button. Press the Blue (◄) colored button. The screen will show the confirmation menu. You can press the Green (►) button to delete or the Red (▲) button to exit the menu. When you press the Green (►) button, the selected channel will be deleted and all following channels will move up in their position accordingly.

01 CNN	11 S05	21 S12
02 BBC P	12 S07	22 S13
03 SHOW	13 S09	23 S14
04 TRT 1	14 S10	24 S15
05 TRT 1	15 C05	25 S16
06 MTV	16 C07	26 S17
07 TRT 1	17 C10	27 S18
08 TV5	18 C11	28 S20
09 EUROS	19 C12	29 S21
10 S04	20 S11	30 S22

Skip Name
Move Delete

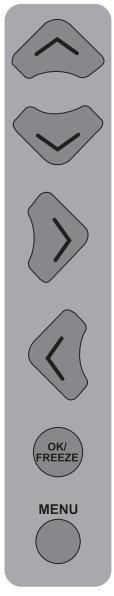
Skipping a program that has been stored



In the event that you do not wish to come across certain programs while going up and down between channels using the (PR+)/(PR-) buttons, then you can use the following function. Select the program to be stored by using the Up-down (▲)/(▼) button or Right-left (◄)/(►) button. Press the Red (▲) colored button. To the right of the name of the program to be skipped will appear the letter "S" in red. You have the option of applying this method on more than one program channel.
In order to see the program numbers that are to be skipped, write down the number of the concealed program directly. To cancel the program skipping function press the Red (▲) button again. The red "S" to the right of the program name will disappear, an the skipping will be cancelled.

To name the programs

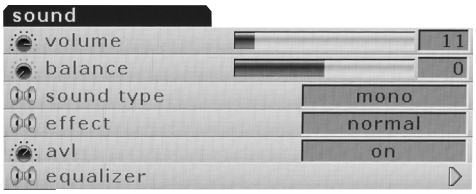
The programs in the table might show the channel names automatically with ATS, but could also show the channel number instead of the name.



You can name any or all of the programs with names that have a maximum of five characters.
Select the program you want to name using the Up-down (▲)/(▼) or Right-left (◄)/(►) buttons.Press the Yellow (▼) button. The screen will show the number, volume type and name information for the channel you want to name. Using the Up-down (▲)/(▼) buttons to select the desired letter, number or sign. the second letter use the Right-left (◄)/(►) button and again use the Up-down (▲)/(▼) buttons to select the desired letter, number or sign. After entering all the letters press the (OK/FREEZE) button to store the name.
To write names for any of the other programs, simply repeat the above procedure. In the event that you wish to exit the application, simply press the (MENU) button.
If no name is enter for any program, the program number will be automatically displayed.

The setup of your television: Setting up the Sound Menu

You can set the volume with the " VOL+" and "VOL -" buttons on the television or the (VOL+) , (VOL-) buttons on the remote control.
You can control the other sound settings by entering the Sound menu For this application all you need to do is press the (MENU) button of your remote control. Select the Sound menu with the direction (▶) button. You can reach this menu directly by pressing the Red (▲) button. Select the functions from the headings in this menu.



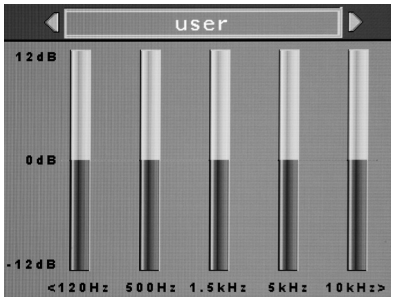
Effect: If you want to add depth to the sound of the program you watch, select Spatial with the (▶) button.
Television transmitters have different sound levels. This can be noticed from the different volume levels that can be heard while switching from one program to another. Using the right/left movement (◀)/(▶) buttons switch to Open. The AVL (Automatic Volume Limiting) function maintains the same sound level as you switch from program to program. To cancel choose Closed.

Balance: To adjust the volume balance between the left and right speakers to the desired level, select the Balance bar using the down (▼) button. Using the right/left movement (◀)/(▶) buttons adjust the balance.

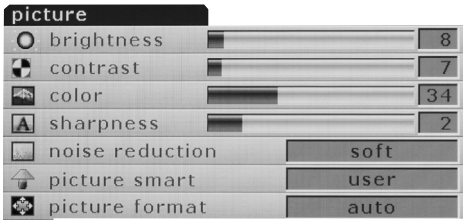
Sound Type: The program you watch might be stereo or in two different languages. Using the right/left keys (◀)/(▶) in this menu you can select Mono/Stereo or Dual-I/Dual-II language.

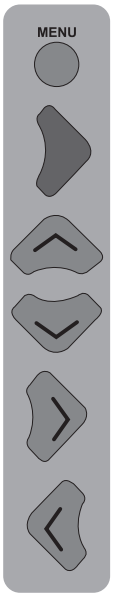
Equalizer: Selecting the Equalizer mark press (OK/FREEZE) or (▶) button. The equalizer setting function will be displayed. You can selected with the right/left (▶/◀) buttons, pre-programed, unchangeable sound enhancing Music, Sport, Cinema and Speech, User settings for the programs you are watching. These can be adjusted by you in the User selection. To adjust the User selection; select the User selection and press the (OK/FREEZE) button.You can adjust the frequency levels with the (▼) and (▲) buttons. You can select 120Hz, 500Hz, 1.5KHz, 5KHz and 10KHz frequency bands with (▶) and (◀) buttons. Storing the adjustment levels in memory press the menu button to exit the user option.
You can exit the equalizer function pressing the(MENU)button again.

Please note: You can choose the equalizer position directly from the (♪) button of your remote control.
You can exit the equalizer function pressing the (TV) button at any time.



Picture Setup (Green button)





By pressing the (MENU) button on your remote control please enter the Picture menu. You can enter this menu directly by pressing the (▶). Select the setting function you want using the Up and down buttons (▲)/(▼) and adjust their levels with the right and left (◀)/(▶).

The picture brightness, contrast, color and sharpness levels can all be adjusted according to your desire. The changes you make in the picture settings will be automatically stored without any further transactions necessary being your Personal settings.

Static Reduction: Using this feature you can reduce static by selecting Normal, Soft, Softest, Sharpest and Sharp function.

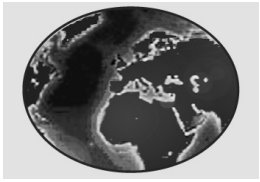
Smart Picture: This is one of the pre-installed and unchangeable features, to select this feature use your (◀)/(▶) buttons. Soft, Natural and Rich are constant values. User are the values you stored into memory. Furthermore, you can select one of the non-adjustable default settings in the memory (Picture Mode) by pressing the "◈" button on your remote control.

Picture Format: This feature enables you to watch any broadcast image in the format you desire. These are; Auto, 16:9 Subtitle, Letterbox, 4:3 and Zoom. You can do the selection without entering the picture menu by using the "⏭" format selection button.

Color Tint: When NTSC video is used in SCART, Color Tint settings can be made. If you do not use such a video type the Color Tint choice is not seen in the menu. If NTSC video is used in SCART this choice becomes active and can be seen in the menu.

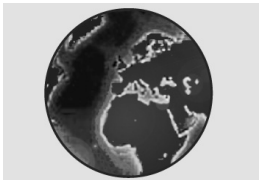
Depending on the type of broadcast being transmitted, programmes can be viewed in a number of formats. Press the "⏭" button repeatedly to select between **Zoom, Letterbox, Subtitle, Auto, 16:9,** and **4:3**.
Please note: Whenever the MENU button is pressed the picture size setting will change while the menus are ON the screen. This is to ensure that the menus do not overlap the edges of the viewable area.

Zoom



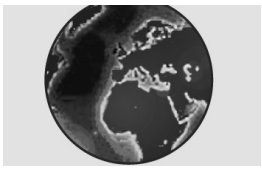
This setting will entarge the image to fit the screen by streching the image horizontally, holding the correct proportions at the centre of the image. Some distrotion may occur.

Letterbox



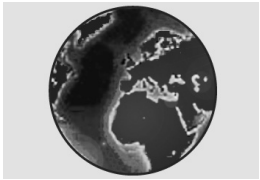
Use this setting when watching a widescreen DVD, widescreen video tape or a 16:9 broadcast (when available). Due to the range of widescreen formats (16:9, 14:9, 20:9 etc.) black bars may be visible on the top and bottom of the screen. Letterbox format removes blck bars or makes it much less visible.

Subtitle



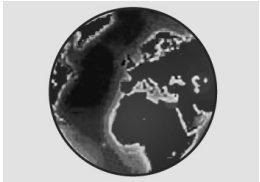
When subtitles are included on a letterbox format broadcast, this setting will raise the picture to ensure that all the text is displayed.

Auto



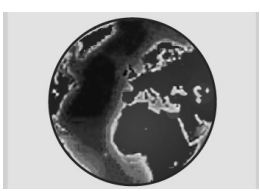
Some channels may send automatic screen formatting. If you wish to swich automatically to this format select Auto.
The TV will outomatically switch to detected format from the scart inputs.

16:9



Use this setting when wathching a widescreen DVD, widescreen video tape or a 16:9 broadcast (when available). Due to tre range of widescreen formats (16:9, 14:9, 20:9 etc.) black bars may be visible on the top and bottom of the screen.

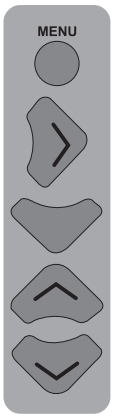
4:3



Use this setting to view a trie 4:3 broadcast.

Using the special functions to change the size of the displayed image (i.e. changing the height/width ratio) for the purposes of public display or commercial gain may infringe on copyright laws.

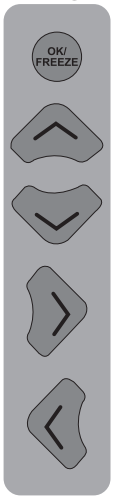
Features Menu (Yellow Button)



Press the (MENU) button on your remote control. Select the Function menu line with the (▶) button.
You can reach this menu directly by pressing the Yellow (▼) button. You can select the headings you want to adjust in this menu by using the Up/down (▲)/(▼) buttons.

Child Lock: If you switch this feature On, the buttons on the TV will not work when the TV is in Stand-by mode or on and screen will show a Child Lock warning.

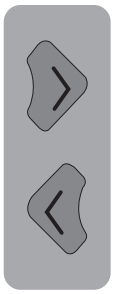
Language: Select the menu language line and press (OK/FREEZE) or the right (▶) button. The screen will show the menu languages. Select the desired language using the Up-down (▲)/(▼) and Right-left (◀)/(▶) buttons. Press the (OK/FREEZE) button again. Your television will now feature the language you have choosen for all the adjustment indicators.



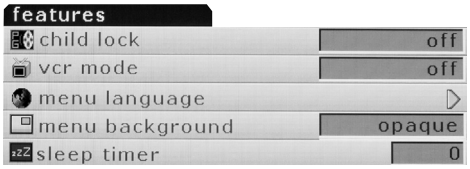
English	Norsk	Česky
Deutsch	Deens	Slovenščina
Français	Dutch	Hrvatski
Italiano	Suomi	Magyar
Español	Polski	Româna
Português	Ελληνικά	Српски
Türkçe	Русский	Slovensko
Svenska	תירבע	Български
Menu: Back		TV: Exit

Menu Background: Using this feature you can adjust the background of the viewable menus and other OSDs as Transparent or Opaque.

Stand-by Control: Your television features an automatic stand-by feature which can be enabled between 15 and 120 minutes. If you want your television to autmatically go into stand-by, please select the Stand-by Control line. Select the desired duration with the Right (▶) and left (◀) button.
At the end of the choosen duration the screen will show a 30 second countdown before switching off the screen and entering into stand-by. To cancel the automatic stand-by select "0" at the Stand-by Control.

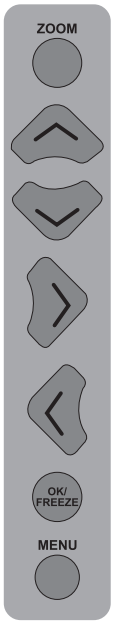


VCR mode: Using this feature you can avoid image distortions from the device or the magnetic tape while watching. For this you have to swtich the VCR mode to ON.



Please note: This feature is only active for the AV inputs. This feature will not be seen in Function menu while watching programs or in PC mode. This feature becomes automatically active in the "0" numbered program.When you store the "0" numbered channel as video device antena output, you will be able to avoid image distortions from the device or the magnetic tape while watching.

ZOOM: To activate this feature you have to press the (ZOOM) button on your remote control while watching a program. When you enter this menu you will see in the lower right corner of the screen the Zoom sub-menu. Using the Up/down (▲)/(▼) buttons you can enlarge or shrink the image in 16 steps. During the Zoom process the image will be enlarge focused on the center.
want to move the image up/down or right/left (◀)/(▶) press the (OK/FREEZE) button on your remote.
buttons to move around.
In the event that you wish to exit the Zoom menu, simply press the (MENU) button.
Please Note: The Zoom function is not available during PIP.



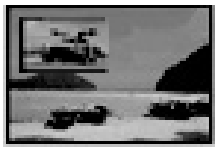
FREEZE: This feature enables you to freeze the image of a program you are watching. For this use the (OK/FREEZE) button on your remote control, make sure you don't have any menus on screen. The image will be frozen until you press the button the second time.

Please Note: The Freeze function is not available during PIP.

PIP Usage (Picture in Picture) Feature:

Press the (PIP SEL.) button on your remote control.

The screen will show the PIP window selection menu.



In this menu select either Picture in Picture (PIP) or Divided Screen (PAP) and press the (OK/FREEZE) button. According to the selection a picture will open in main picture and will position itself in the lower screen.

If you choose Full Screen mode PIP will go out. In the event that you wish to exit PIP mode, simply press the "TV" button.

Note:

1) From the program you are watching or from AV mode, you can open the PIP window, and change the other programs through the main image.

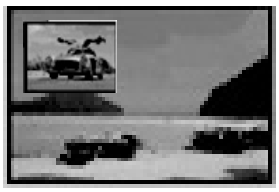
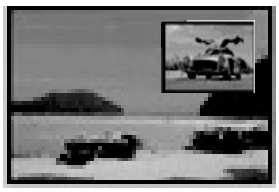
2) You can use PIP in PC or DVI mode.

3) The same AV input cannot be watched with PIP and the main image.

PIP Position

This feature enables you to position your PIP window. For this press the (PIP POS.) button, while having PIP on screen, to bring the PIP Position menu on screen.

Press the right/left (◀)/(▶) buttons to make the PIP Position selection. After you positioned your PIP window you can exit the menu by pressing the (MENU) button on the remote control.

PIP Size

This feature enables you to resize your PIP window. For this press the (PIP SIZE) button, while having PIP on screen, to bring the PIP Size menu on screen.

Press the right/left (◀)/(▶) buttons to make the PIP Size selection. After resizing your PIP window you can exit the menu by pressing the (MENU) button on the remote control.

PAT Mode

While watching TV you can enter the PAT (Picture and Teletext) mode by pressing the (PAT) button on your remote control. This feature enables you to read the program's teletext, if available, while watching the very same program.

To exit this mode press the (PAT) button on your remote control again.

Using Teletext

Teletext is an information system that displays text on your TV screen. Using the teletext control buttons you can view pages of information that are listed in the teletext index.

Please Note

No on screen display is available in text mode. The contrast, brightness and colour cannot be changed but the volume control is still available.

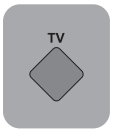
To enter Text mode

Please Note

Make sure the TV channel you are watching transmits teletext.

Press the (TEXT/MIX) button. The text page will appear, normally the index page.

To exit Text mode



Press the (TV) button. The screen will return to the channel you were watching.

To select a page of text

Find the number of the page in the index and enter it using the Numeric buttons. The number of the page will appear in the top left hand corner of the screen.

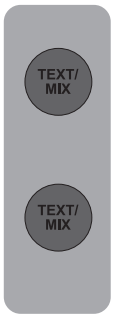
The page counter will search for your page. When it finds it, the page will be displayed.

To move to the next page of text press the (PR+)/(^) button.

To move to the previous page press the (PR-)/(v) button.

To return to the index page press the (i) button.

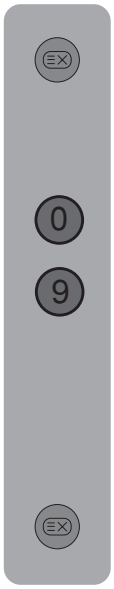
TV/Text mix



To view a TV programme whilst in text mode, press the (TEXT/MIX) button. The text will be superimposed over the TV programme.

Press the (TEXT/MIX) button again to return to the channel you are watching.

Page search whilst watching TV



In Text mode press the (EX) button. The TV will return to TV mode with the text page number in the top left hand corner of the screen.

Enter the page number you want using the Numeric buttons.

The top line of the text page will appear whilst the text searches for your page. When the page is found the number will remain in the top left hand corner of the screen.

Press the (EX) button to view your selected page of text.

Double height text

If you have difficulty reading the text on the TV you can double the height of the text.

Press the (SIZE) button. The top half of the page will be displayed in double height text.

Press the (SIZE) button again. The bottom half of the page will be displayed in double height text.

Press the (SIZE) button again to return to the full page.

Page Stop

If the page of text you have selected contains sub pages, these sub pages will automatically be displayed in order with a delay to allow you to read the page.

To stop the move to the next sub page press the () button.

To continue moving through the sub pages press the () button again.

To select a sub page

If the page of text you are viewing contains sub pages, the number of the sub page you are on and the total number of sub pages is displayed on the right of the screen i.e. 1/7.

To select a sub page press the () button. Press the green button to select next sub-page or press the red button to select the previous sub-page.

Enter the number of the sub page, using the Numeric buttons in the format S0001 for sub page 1.

The teletext will search for the sub page. This may take some time. To return to the TV whilst the teletext is searching press the () button.

When the page number is found it will appear in the top left hand corner of the screen.

Press the () button again to view the text page.

To reveal information

Press the () button to reveal concealed information (quiz answers etc.).

Press the () button again to cancel the information again.

Clock

Press the () button, whilst watching a TV program , to display the time.

Fastext

At the bottom of the teletext screen is a row of subject headings in red, green yellow and blue.

The remote control has a row of coloured buttons corresponding to the row of coloured subjects on the screen.

Pressing one of the coloured buttons will take you directly to the page corresponding to the subject heading.

Connecting external equipment

AV Inputs:

Press the (◆) button on your remote control. You will enter the Source menu from where you can elect the screen input mode. Here select the input you desire.

TV: To move to TV mode while in AV modes, move on to the selection and press the (OK/FREEZE) button.

Scart1: To be able to view the broadcasting images form the device connected to Scart1, move on to the selection and press the (OK/FREEZE) button. (If the connected device has an RGB output, you will be able to watch it over Scart.)

Scart2: To be able to view the broadcasting images form the device connected to Scart2, move on to the selection and press the (OK/FREEZE) button. (If the connected device has an RGB output, you will be able to watch it over Scart.)

SVHS: To be able to view the images form the device connected to the S-Video input, move on to the selection and press the (OK/FREEZE) button.

AV: To be able to view the images form the device connected to the RCA (Chinch) input, move on to the selection and press the (OK/FREEZE) button.

PC: To be able to view monitor images in PC mode, move on to the selection and press the (OK/FREEZE) button.

DVI: To be able to view images in DVI mode, move on to the selection and press the (OK/FREEZE) button.

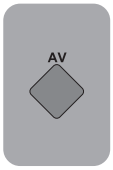
Connecting a video recorder

① Via SCART

Make sure the TV and video recorder are both switched off.

Plug one end of the SCART lead (not supplied) into the back of the video recorder and the other end into one of the SCART sockets on the back of the TV.

Switch on the video recorder and the TV.



Press the (◆) button on the remote control to select SCART1 or SCART2 to correspond with the SCART socket you are using on the back of the TV.

Please note: You can connect RGB external equipment via Scart. It is necessary to you use a full Scart cable for this purpose.

Select the video output of the external device by using its menu, and set to RGB.

② Via RCA lead (optional)

Make sure the TV and video recorder are both switched off.

Plug one end of the RCA lead into the video and audio out sockets on the back of the video recorder and plug the other end into the video and audio in sockets of the TV.

If the sound is mono, use the Audio Input L. and in the SOUND menu select the MONO feature.

③ Via aerial socket

Make sure the TV and video recorder are both switched off.

Unplug the aerial lead form the TV and plug it into the aerial socket on the video recorder.

Plug a coaxial plug into the RF out socket on the rear of the video recorder and plug the other end into the aerial socket on the TV.

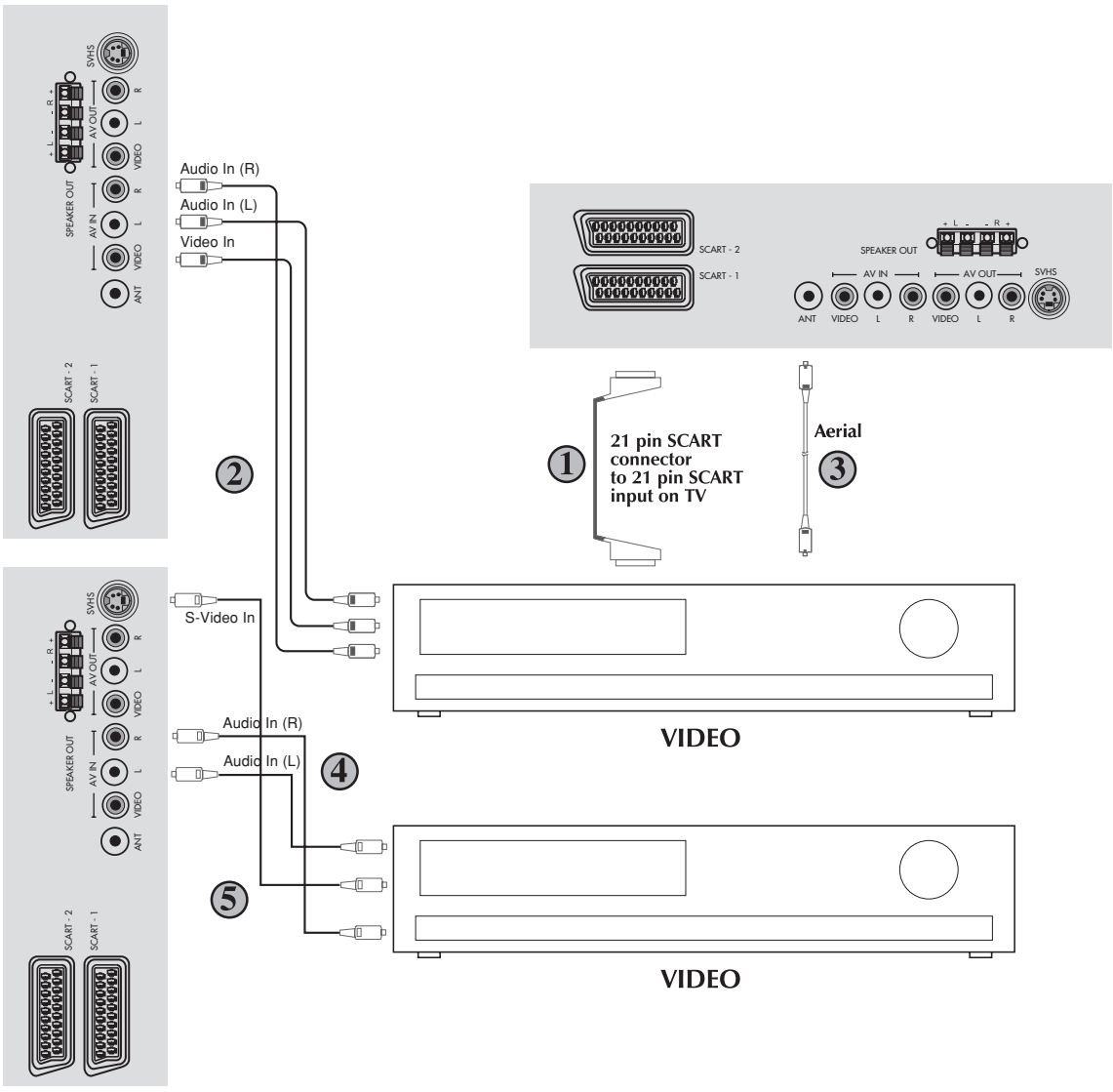
Switch on the video recorder and the TV. If your video recorder has a test signal, switch it on. (Refer to the video recorder user guide).

See 'Tuning the TV' and carry out the tuning procedure for the video recorder test signal. Select a programme number 0.

④-⑤ Via RCA lead and S-Video socket

You can also connect it through the S-Video socket of the TV.

Plug the S-Video plug into the S-Video socket and the audio leads into the audio sockets.



Connecting a DVD player

①Via SCART

Make sure the TV and DVD player are both switched off.

Plug one end of the SCART lead (not supplied) into the back of the DVD player and the other end into the SCART socket on the back of the TV.

Switch on the DVD and the TV.

②Via RCA lead

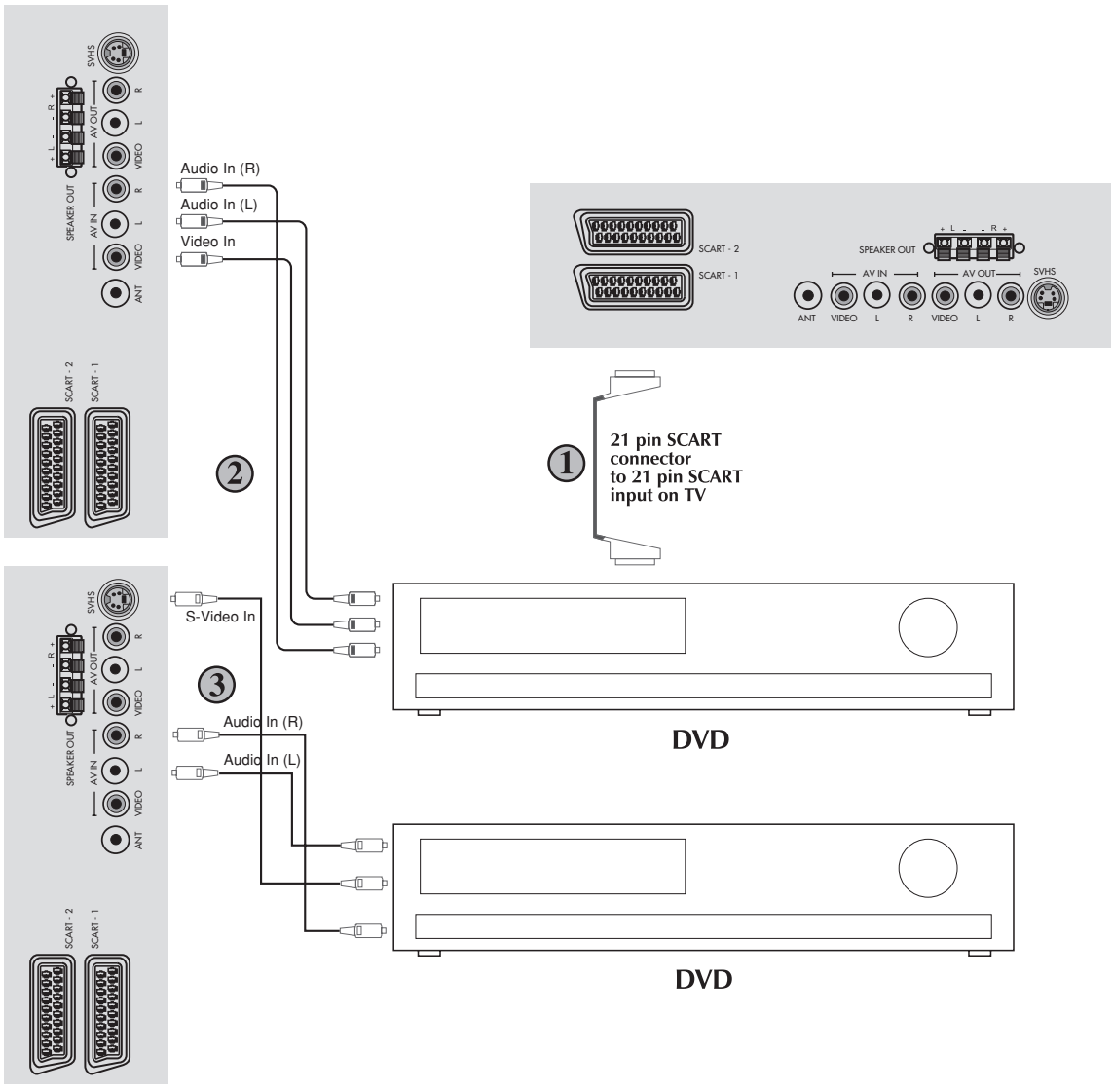
Make sure the TV and DVD player are both switched off.

Plug one end of the RCA lead into the video and audio out sockets on the back of the DVD player and plug the other end into the video and audio in sockets of the TV.

③Via RCA lead and S-Video socket

You can also connect it through the S-Video socket of the TV.

Plug the S-Video plug into the S-Video socket and the audio leads into the audio sockets.



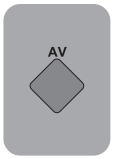
Connecting a decoder

Via SCART

Make sure the TV and decoder are both switched off.

Plug one end of the SCART lead (not supplied) into the back of the decoder and the other end into the SCART on the back of the TV.

Switch on the decoder and the TV.



Press the (◆) button on the remote control to select SCART1.

② Via RCA lead

Make sure the TV and decoder are both switched off.

Note: For Decoder connection Via RCA lead your Decoder device must have the tuner built in.

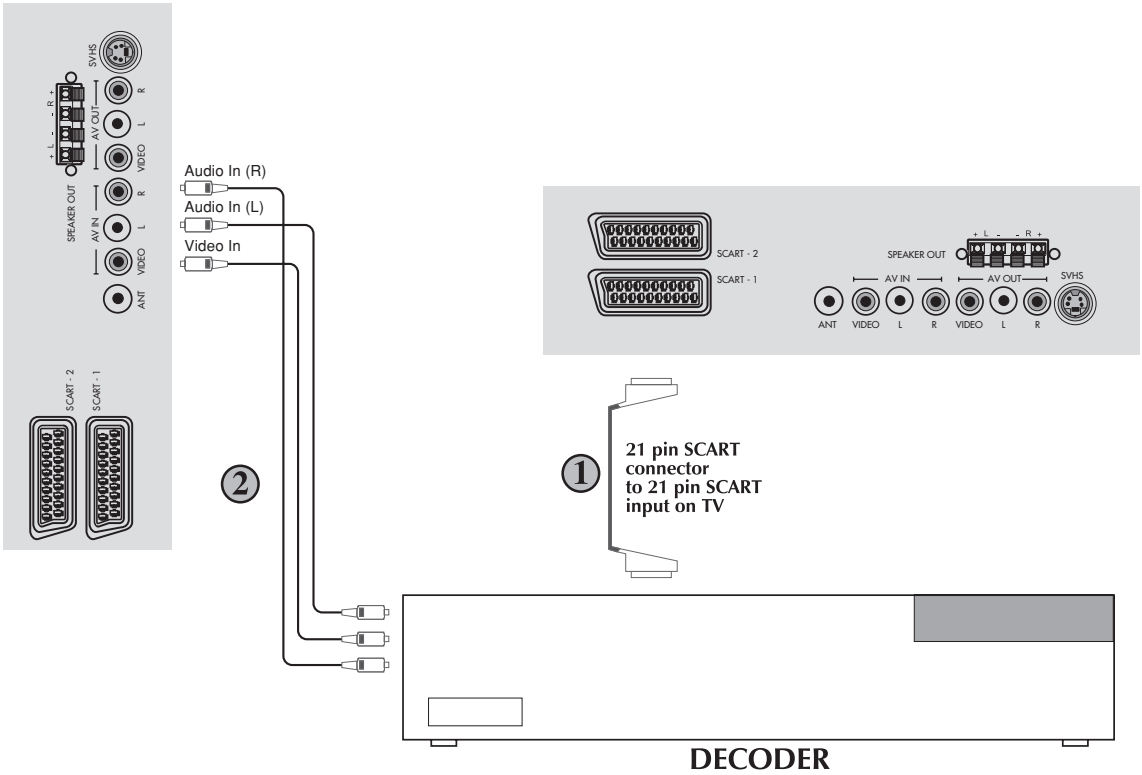
Plug one end of the RCA lead into the video and audio out sockets on the back of the decoder and plug the other end into the video and audio in sockets on the TV.

Connecting DVI-D

Your TV has DVI-D input socket. You can connect any device such as PC etc. which has DVI digital out using the proper cable. At the same time you can listen to the sound from the connected device. PC or DVI use a special cable to PC-DVI/AUDIO IN input at the back of your TV.

AV Outputs

You can connect any device which is proper to Phono inputs via Phono Video and Audio Outs at the back of your TV set using proper AV cable (not available with the set).
Any programme or AV input which is seen on the main screen other than S-VHS, PC or DVI (which is option) is available as picture and sound signals at Phono Video/Audio outs.
Scart sockets at the back of your TV set are always give the signals of selected programme from the set Tuner.



INTRODUCTION

Because your 42" 16:9 PDP-TV equipment is provided with VGA inputs, it may be used as a PC monitor as well. (Pug&Play)

Connecting PC:

Connect your PC through the D-Sub connector and an appropiate cable (not inlcuded with your TV) to PC-IN input the back of the TV. Again using an appriopiate cable you can connect your PC sound output to the PC-DVI / AUDIO IN input on the back of the TV and listen to sound.

Transition to the PC mode

In order for the PDP to switch to the monitor (PC) mode, you can press the (PC) button on your remote control. In order to switch from the PC mode back to the TV mode, use the (TV) button on your remote control.

PC Input Settings

You can enter the picture setting menu by pressing the (MENU) or the ( ) while in PC mode. In order to make the necessary adjustments in this menu, you can use the right-left, up-down direction ( )/( ) ( )/( ) buttons on your remote control.

Here you can make adjustments to Brilliance and Contrast as well as other adjustments for the monitor listed below.

H.Position: Horizontal position setting
V.Position: Vertical position setting

PHASE: Using the Right/left ( )/( ) buttons you can adjust color and shape.

Picture Format: You can select your PC viewing image from auto, 4:3 or one-to-one.

You can make your choices without entering the picture menu by using the format button on your remote control.

Automatic Configuration: The most suitable geometric settings in accordance to the entry mode is configured by this function. For this application, choice the AUTOMATIC CONFIGURATION option and press the (OK/FREEZE) button.

In PC mode you are able to use ZOOM and PIP as mentioned in the sections above. You can adjust the volume of the device you connect to the Audio-In input at the back of the TV by using the (VOL+)/(VOL-) or /( ) buttons.

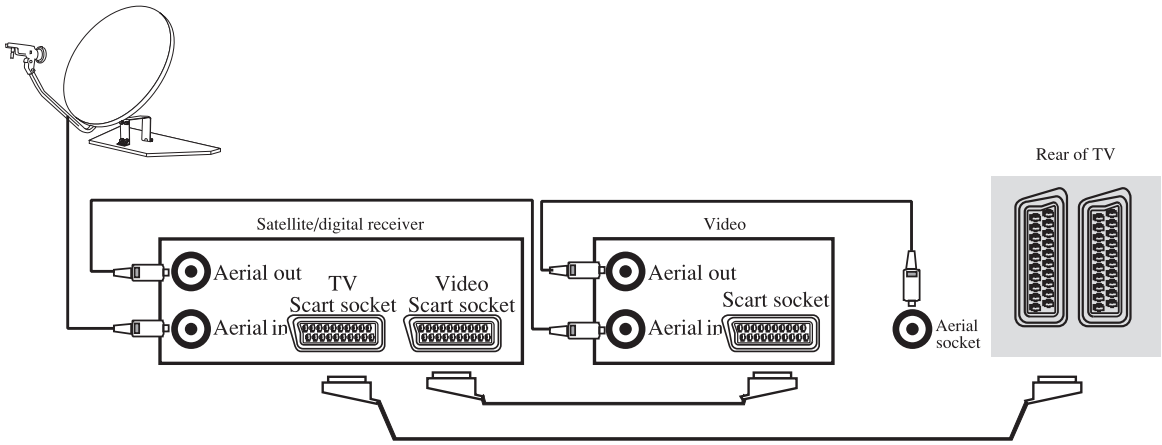
Transition to the DVI mode

Connect your PC or digital video device using its connector and an appropriate cable (not included with your TV) to the DVI input at the back of your TV.Again using an appriopiate cable you can connect your PC or sound device output to the PC-DVI / AUDIO IN input on the back of the TV and listen to sound.

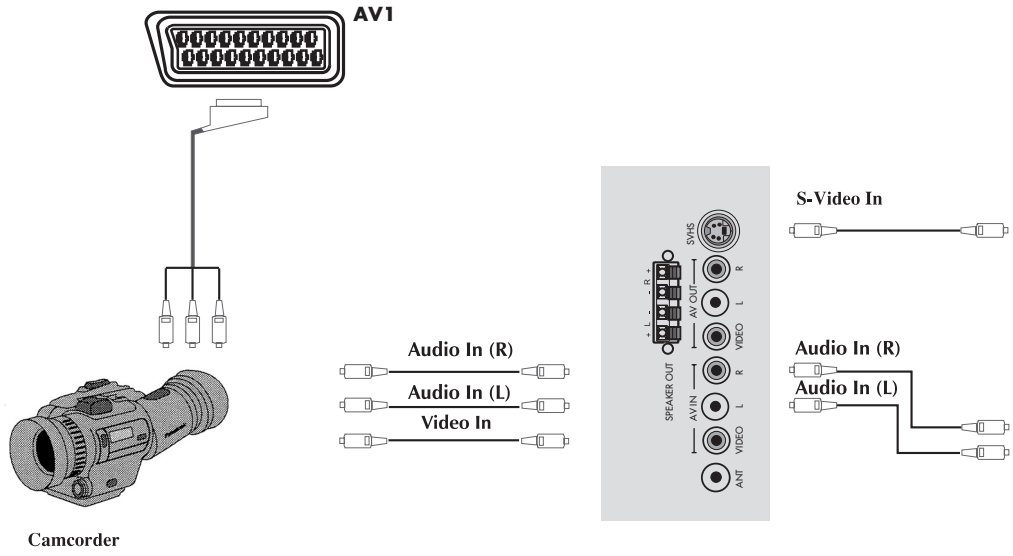
Please Note: To be able to view images in DVI mode your computer must have a graphics card with DVI output.

Adjustments in DVI mode are the same as in PC mode. However automatic configuration will not function in this mode.

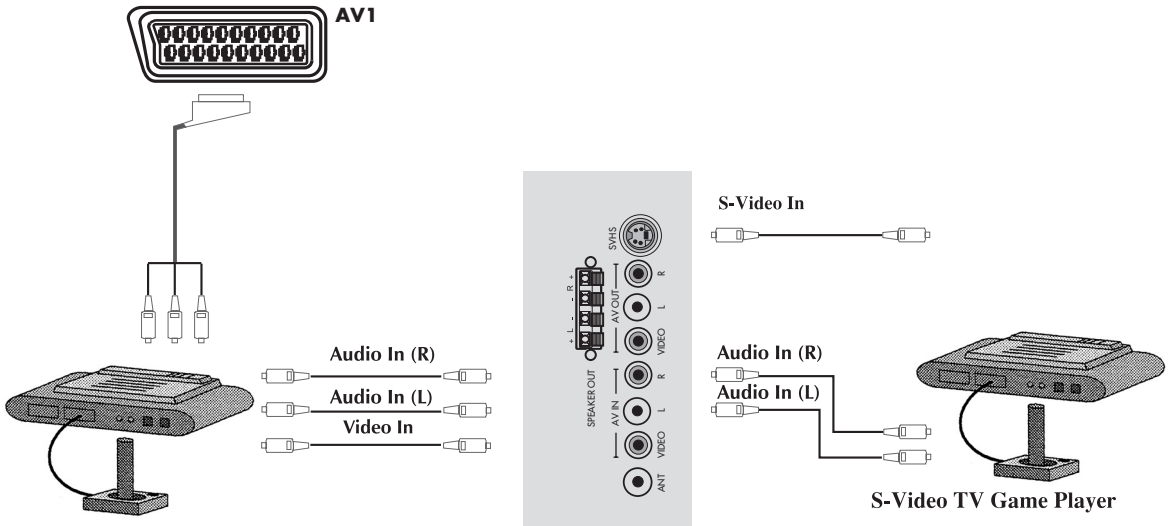
Connecting TV with video and satellite/digital receiver



Connecting TV with camcorder



Connecting TV games and computer



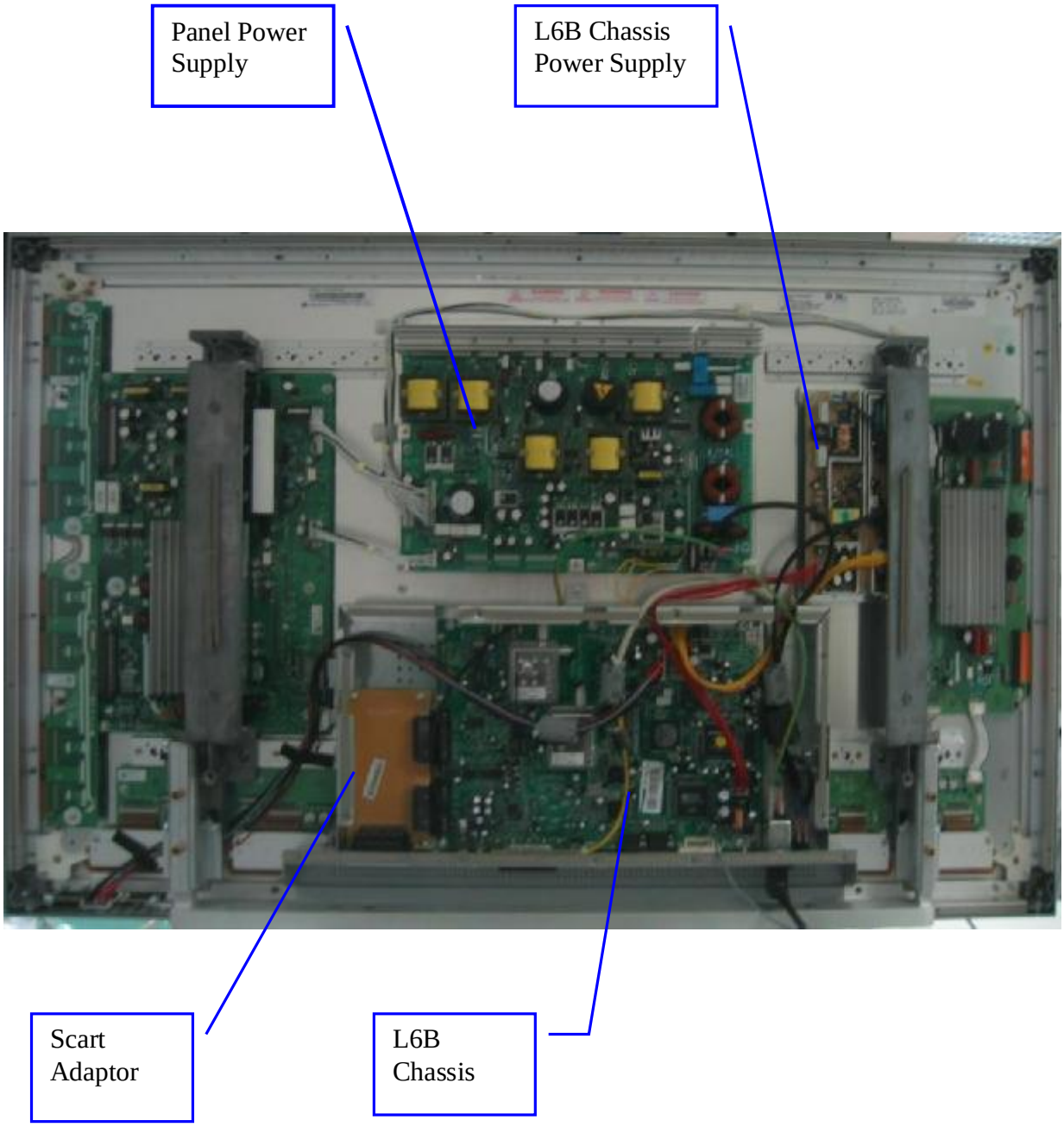
Technical specifications table

Panel size/typee	42" 16:9 Plazma TV
Sound Output (%10 THD)	2X7 W
Power consumption	275 W
Stand by Power consumption	6 W

General technical specifications

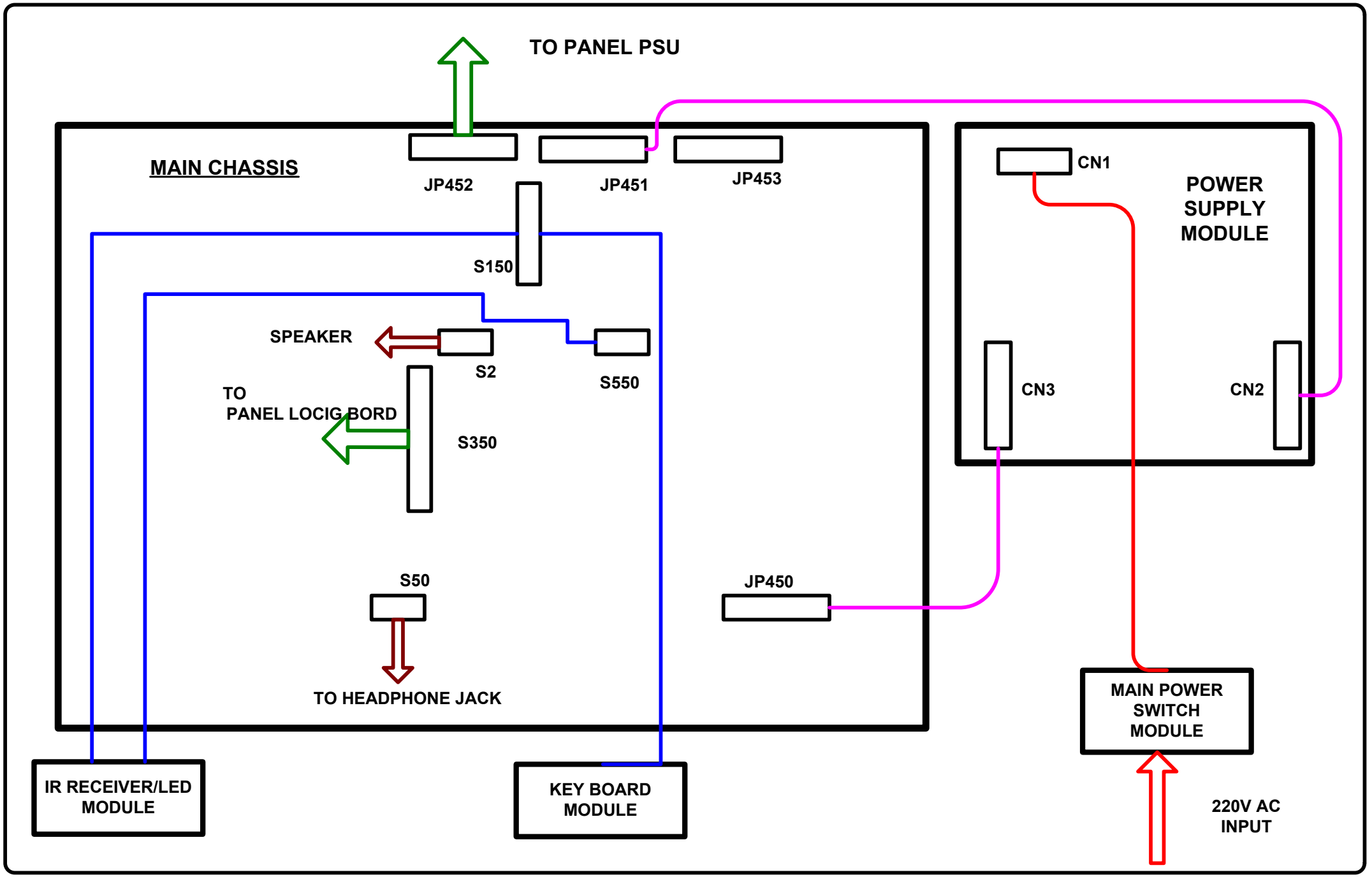
Power Supply

AC: .....230 V 50 Hz
Number of preset programmes: 100
RF Aerial input: .....75 ohm (unbalanced)
Speaker empedance: .....4 ohm
Sound Systems: .....Mono/Stereo/NICAM
Batteries: .....2xUM-4, IEC R03 or AAA 1.5 V
Receiving channels: .....VHF (Band I Channels 2-4)
.....VHF (Band II Channels 5-12)
.....UHF (Channels 21-69)
.....Cable TV (S1-S20/S21-S41)
Receiving Broad system: .....Pal BG
Pal SECAM BG
Pal SECAM BG DK/DK'
Pal SECAM BG LL'
Pal I

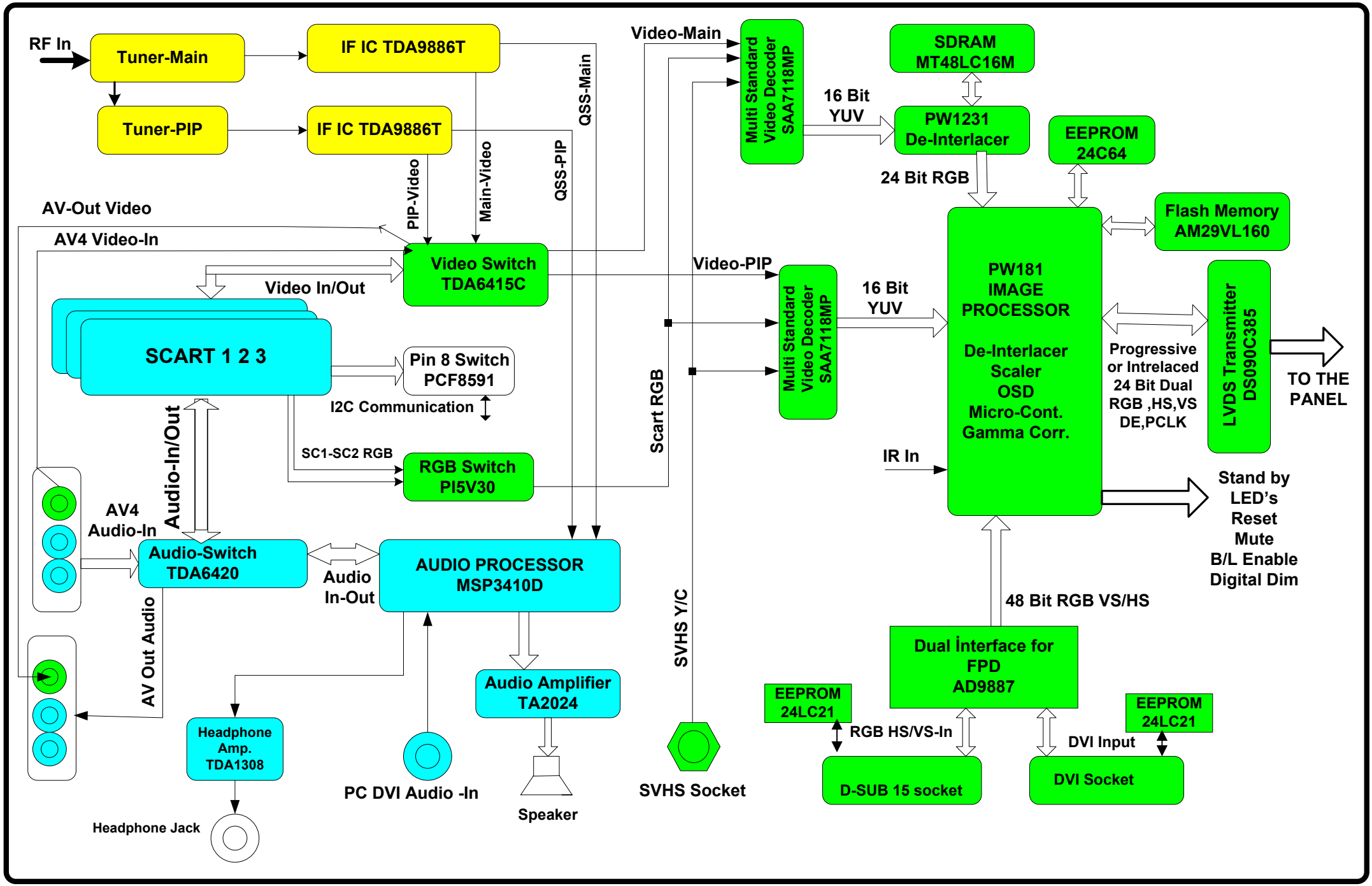


Note: You can find more detailed informations regarding panel and panel modules in the panel sections of the service manual.

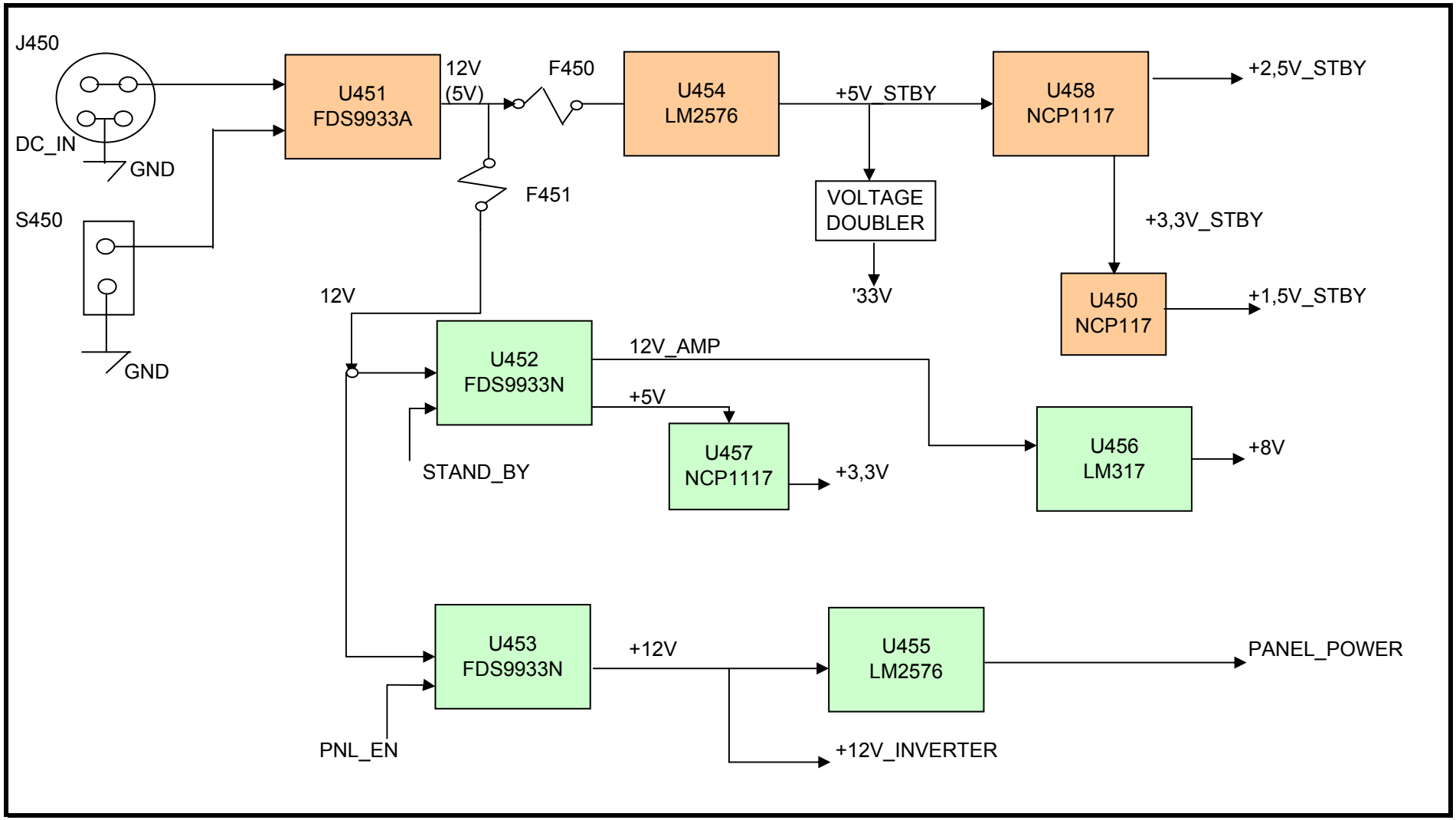
L6B CONNECTION DIAGRAM



L6B BLOCK DIAGRAM



L6B POWER SUPPLY BLOCK DIAGRAM (MAIN CHASSIS)



L6B SERVICE MENU

1. Activating the Service Menu

When the menu is on the screen press ‘9’, ‘3’, ’0’, ’1’ on the remote controller. This will activate the service menu.

2. Service Menu Structure

The service menu has three items: display, calibre and version

2.1 Display

Display item has seven options:

a- Panel
Panel option gives information about the current panel resolution. It is a read only option and can not be set.

b- Factory mode
Used during production, keep "off".

c- Scart prescale
Scart prescale option sets the prescale values for the input sounds entering the scart input of the MSP(Micronas Sound Processor). Changing this value you can adjust the level of the output sound going to loudspeakers for all the sources except the Tuners. The range is between 0 and 100.

d- nicam prescale
Nicam prescale option sets the prescale values for the Nicam standard sounds for tuner inputs. Changing this value you can adjust the level of the output sound going to loudspeakers for Nicam sounds entering the analog sound input of MSP. The range is between 0 and 100.

e- fm/am prescale
fm/am prescale option sets the prescale values for the FM/AM standard sounds for tuner inputs. Changing this value you can adjust the level of the output sound going to loudspeakers for FM/AM sounds entering the analog sound input of MSP. The range is between 0 and 100.

f- Agc(Automatic Gain Control) adjust
Agc adjust option sets the input voltage going to IF decoder AGC pin. Changing this value you can adjust this voltage for optimum Tuner performance. The range is between 0 and 31.

g- R/G/B Brightness/Contrast: These are used for color bias adjustment. The range is Between 0 and 255

2.2 Calibre

Calibre item has nine options:

a- video format
Video format option force the video format to the desired format. Selectable formats are Auto, Pal, NTSC and SECAM.

b- colorspace
Colorspace option gives the information about the video input colorspace input to PW181 IC. Do not change this value unless an error occurred in the colors displayed.

c- test pattern
This option activates the internal pattern of PW181 IC. There are 3 choices: none, vert bars, solid color. None will deactivate the internal pattern. Vert bars choice activates the bar pattern for the selected color component. Solid color activates the solid pattern with one color selected in color component and also you can change the level of the color by solid field level.

d- Color components:
This option selects the color for the internal pattern of PW181 IC. There are 4 choices: all, red, green and blue. If you choose all, you can see the white pattern and if you choose one of the other choices you can see the test pattern with the selected color.

e- solid field level
This option will adjust the level of the colors for the test pattern. The range is betwwen 1 and 64.

f- Initial ATS
This option will enable or disable the Initial setup for the TV. Setting this option to On, the TV will open from the Quick setup menu. Setting this option to Off will disable this option.

g- factory reset
Factory reset option executes a reset operation for the NVRAM. Pressing OK when this option is selected will erase the NVRAM and load default values to NVRAM.

h- dpms
This option selects the Power option for the TV. Setting this option to On the TV will switch to the last state for power on transition. Setting this to Off will disable this option and the TV will always switch to Stand-by state while power on transition.

i- osd timeout
This option sets the OSD timeout for the main menu structure. Selections are 5, 15 and 60 secs. The default is 60 sec.
(backlight:Not used in this product.

2.3 Version

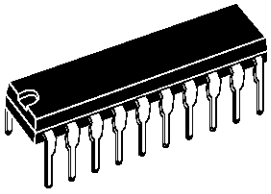
This item gives the information about the version of the software. Also you can see the last modified time for the GUI(graphical user interface).

SGS-THOMSON MICROELECTRONICS

TEA6415C

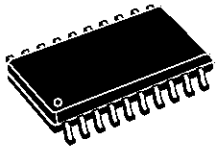
BUS-CONTROLLED VIDEO MATRIX SWITCH

- 20MHz BANDWIDTH
- CASCADABLE WITH ANOTHER TEA6415C (INTERNAL ADDRESS CAN BE CHANGED BY PIN 7 VOLTAGE)
- 8 INPUTS (CVBS, RGB, MAC, CHROMA, ...)
- 6 OUTPUTS
- POSSIBILITY OF MAC OR CHROMA SIGNAL FOR EACH INPUT BY SWITCHING-OFF THE CLAMP WITH AN EXTERNAL RESISTOR BRIDGE
- BUS CONTROLLED
- 6.5dB GAIN BETWEEN ANY INPUT AND OUTPUT
- -55dB CROSSTALK AT 5MHz
- FULLY ESD PROTECTED



DIP20
(Plastic Package)

ORDER CODE : TEA6415C



SO20
(Plastic Micropackage)

ORDER CODE : TEA6415CD

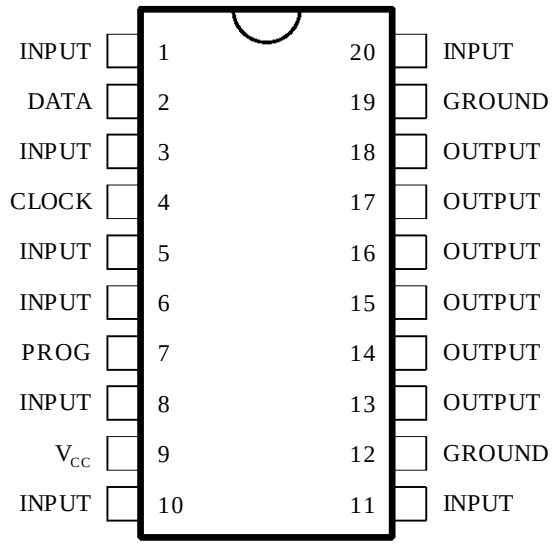
DESCRIPTION

The main function of the TEA6415C is to switch 8 video input sources on the 6 outputs.

Each output can be switched to only one of the inputs whereas but any same input may be connected to several outputs.

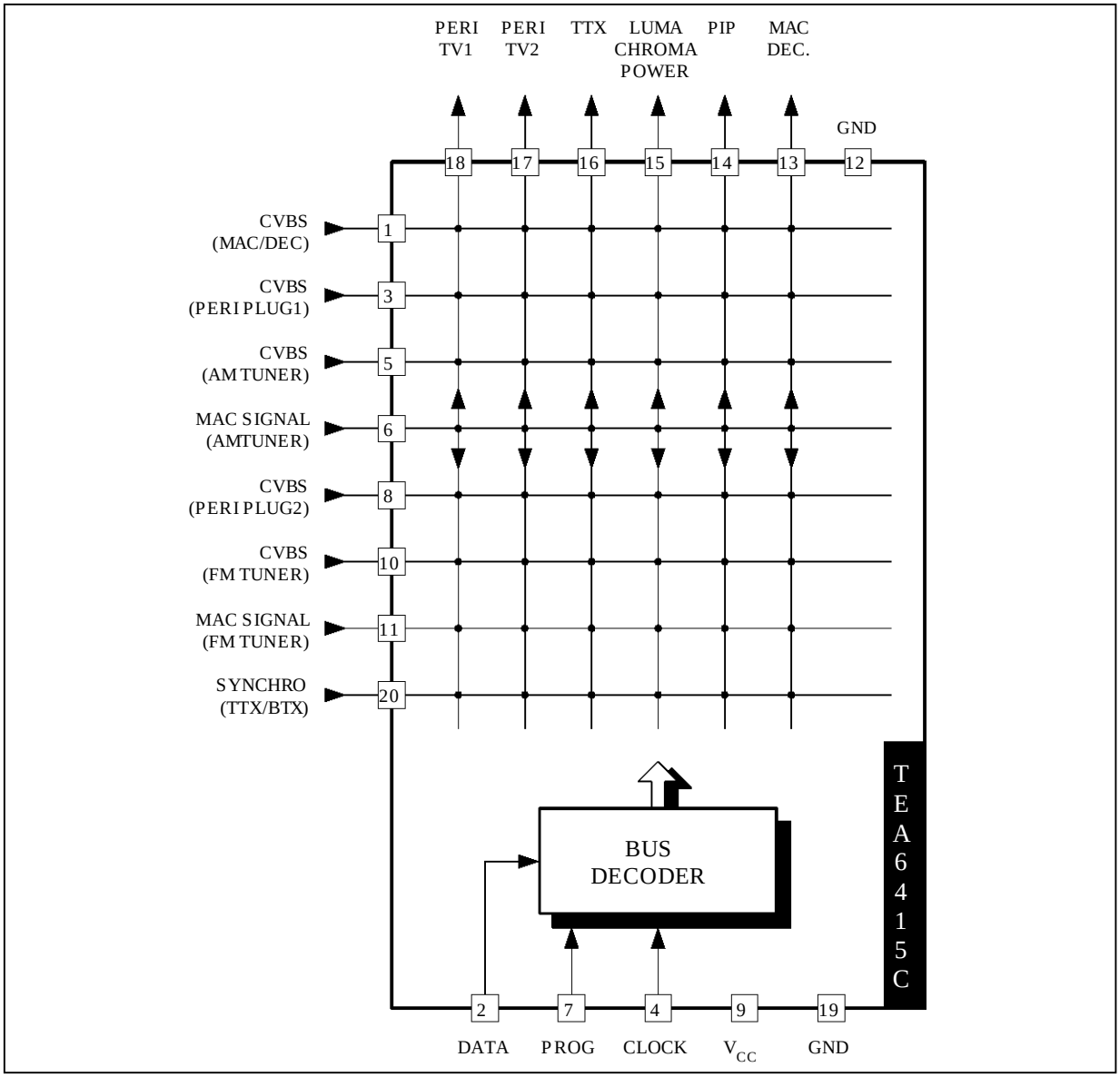
All the switching possibilities are controlled through the I^2C bus.

PIN CONNECTIONS



6415C-01.EPS

BLOCK DIAGRAM



GENERAL DESCRIPTION

The main function of the IC is to switch 8 video input sources on 6 outputs.

Each output can be switched on only one of each input. On each input an alignment of the lowest level of the signal is made (bottom of synch. top for CVBS or black level for RGB signals).

Each nominal gain between any input and output is 6.5dB. For D2MAC or Chroma signal the alignment is switched off by forcing, with an external resistor bridge, 5 V_{DC} on the input. Each input can be used as a normal input or as a MAC or Chroma input (with external resistor bridge). All the switching possibilities are changed through the BUS.

Driving 75Ω load needs an external transistor.

It is possible to have the same input connected to several outputs.

The starting configuration upon power on (power supply : 0 to 10V) is undetermined.

In this case, 6 words of 16 bits are necessary to determine one configuration. In other case, 1 word of 16 bits is necessary to determine one configuration.

I²C-bus controlled single and multistandard alignment-free IF-PLL demodulators

1 FEATURES

- 5 V supply voltage
- Gain controlled wide-band Vision Intermediate Frequency (VIF) amplifier, AC-coupled
- Multistandard true synchronous demodulation with active carrier regeneration: very linear demodulation, good intermodulation figures, reduced harmonics, and excellent pulse response
- Gated phase detector for L and L-accent standard
- Fully integrated VIF Voltage Controlled Oscillator (VCO), alignment-free, frequencies switchable for all negative and positive modulated standards via I²C-bus
- Digital acquisition help, VIF frequencies of 33.4, 33.9, 38.0, 38.9, 45.75, and 58.75 MHz
- 4 MHz reference frequency input: signal from Phase-Locked Loop (PLL) tuning system or operating as crystal oscillator
- VIF Automatic Gain Control (AGC) detector for gain control, operating as peak sync detector for negative modulated signals and as a peak white detector for positive modulated signals
- External AGC setting via pin OP1
- Precise fully digital Automatic Frequency Control (AFC) detector with 4-bit digital-to-analog converter, AFC bits readable via I²C-bus
- TakeOver Point (TOP) adjustable via I²C-bus or alternatively with potentiometer
- Fully integrated sound carrier trap for 4.5, 5.5, 6.0, and 6.5 MHz, controlled by FM-PLL oscillator
- Sound IF (SIF) input for single reference Quasi Split Sound (QSS) mode, PLL controlled
- SIF-AGC for gain controlled SIF amplifier, single reference QSS mixer able to operate in high performance single reference QSS mode and in intercarrier mode, switchable via I²C-bus
- AM demodulator without extra reference circuit
- Alignment-free selective FM-PLL demodulator with high linearity and low noise
- I²C-bus control for all functions
- I²C-bus transceiver with pin programmable Module Address (MAD)
- Four I²C-bus addresses via MAD.

2 GENERAL DESCRIPTION

The TDA9885 is an alignment-free multistandard (PAL and NTSC) vision and sound IF signal PLL demodulator for negative modulation only and FM processing.

The TDA9886 is an alignment-free multistandard (PAL, SECAM and NTSC) vision and sound IF signal PLL demodulator for positive and negative modulation, including sound AM and FM processing.

3 APPLICATIONS

- TV, VTR, PC and STB applications.

4 ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
TDA9885T/V3	SO24	plastic small outline package; 24 leads; body width 7.5 mm	SOT137-1
TDA9885TS/V3	SSOP24	plastic shrink small outline package; 24 leads; body width 5.3 mm	SOT340-1
TDA9885HN/V3	HVQFN32	plastic, heatsink very thin quad flat package; no leads; 32 terminals; body $5 \times 5 \times 0.85$ mm	SOT617-1
TDA9886T/V3	SO24	plastic small outline package; 24 leads; body width 7.5 mm	SOT137-1
TDA9886TS/V3	SSOP24	plastic shrink small outline package; 24 leads; body width 5.3 mm	SOT340-1

6 BLOCK DIAGRAM

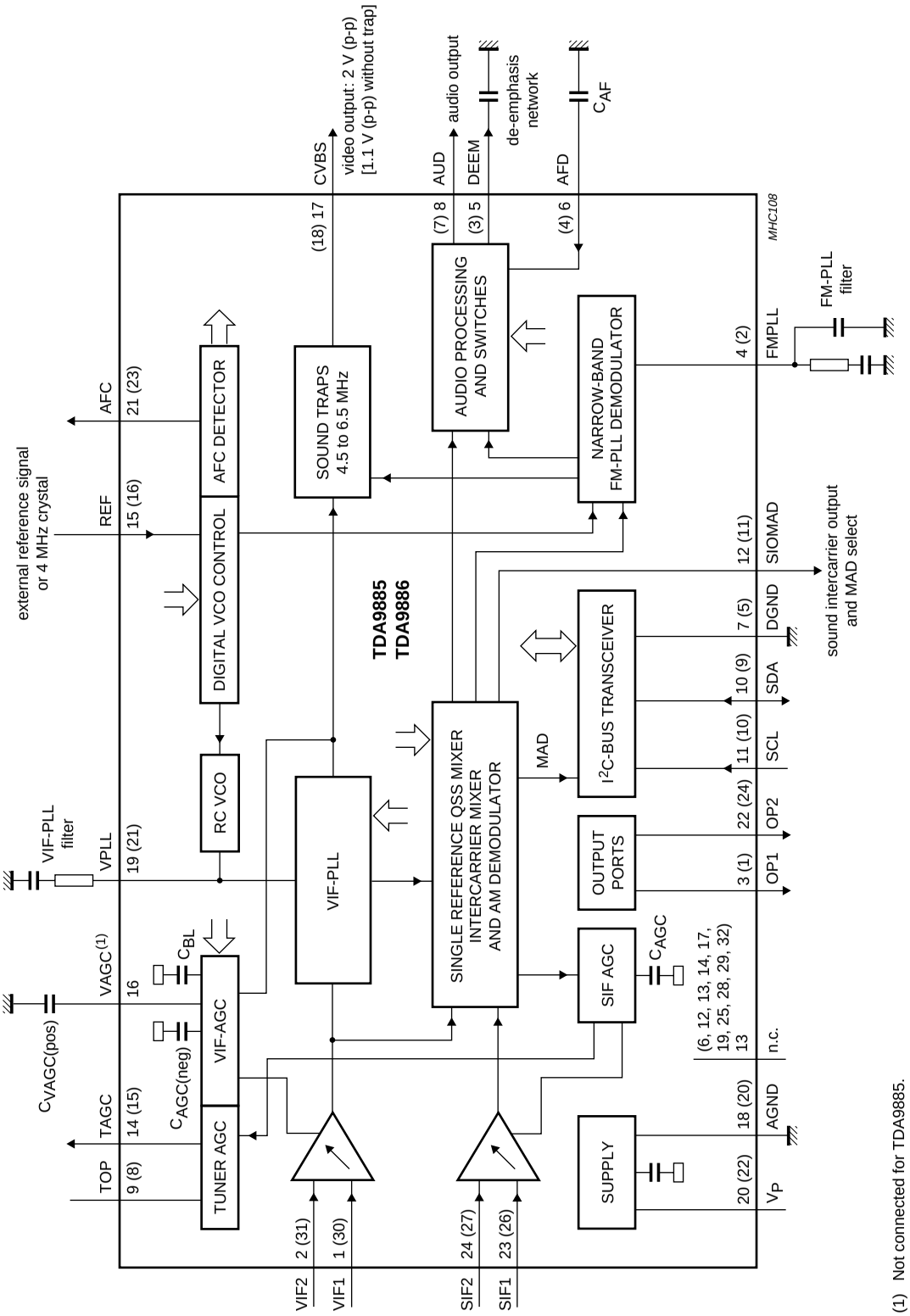


Fig.1 Block diagram.

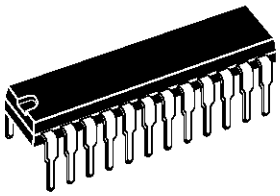
(1) Not connected for TDA9885.
Pin numbers for TDA9885HN in parenthesis.

SGS-THOMSON MICROELECTRONICS

TEA6420

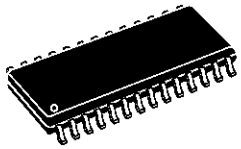
BUS-CONTROLLED AUDIO MATRIX

- 5 STEREO INPUTS
- 4 STEREO OUPUTS
- GAIN CONTROL 0/2/4/6dB/MUTE FOR EACH OUTPUT
- CASCADABLE (2 different addresses)
- SERIAL BUS CONTROLLED
- VERY LOW NOISE
- VERY LOW DISTORSION



SHRINK24
(Plastic Package)

ORDER CODE : TEA6420



SO28
(Plastic Micropackage)

ORDER CODE : TEA6420D

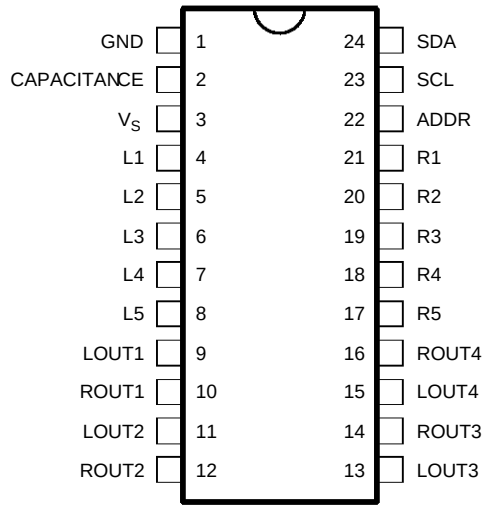
DESCRIPTION

The TEA6420 switches 5 stereo audio inputs on 4 stereo outputs.

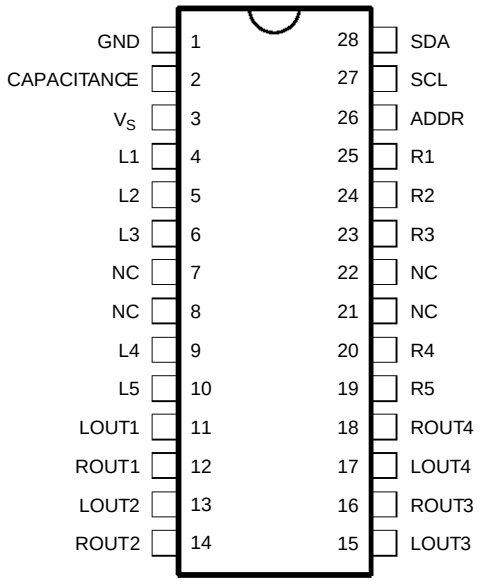
All the switching possibilities are changed through the I^2C bus.

PIN CONNECTIONS

SHRINK24

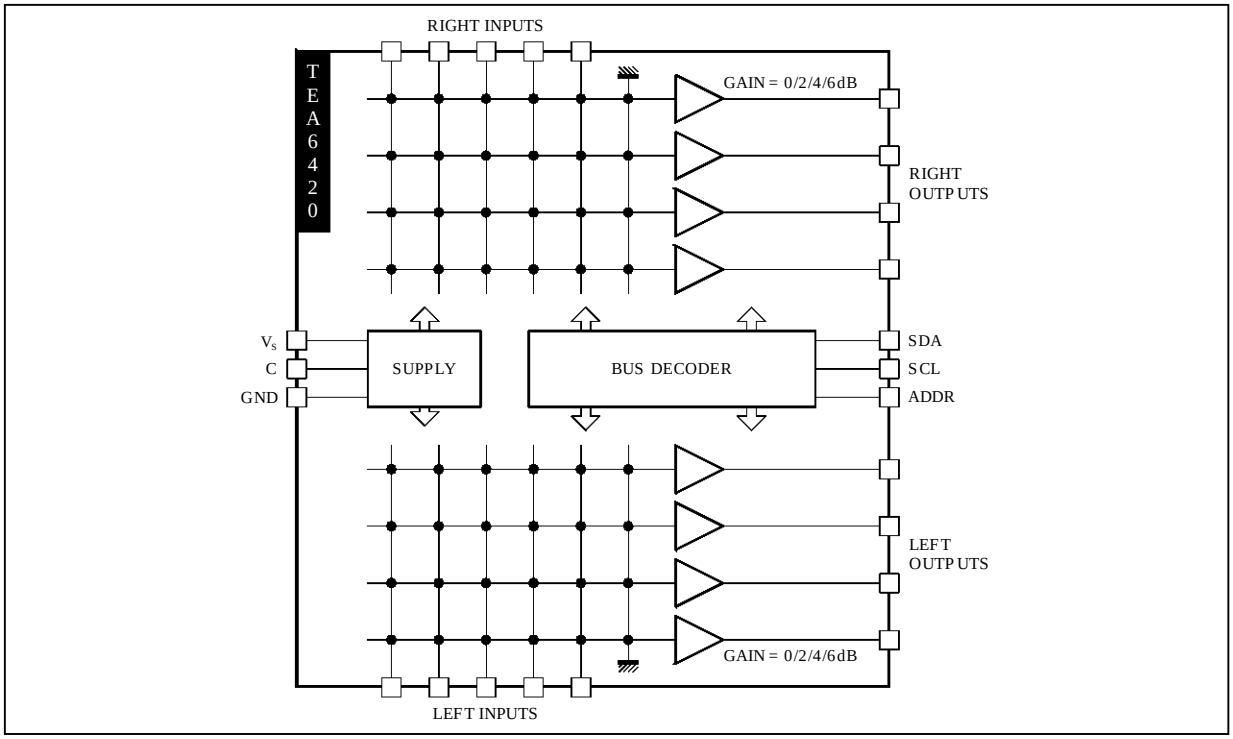


SO28



6420-01.EPS / 6420-02.EPS

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	10.2	V
T_{oper}	Operating Ambient Temperature	0, + 70	^oC
T_{stg}	Storage Temperature	- 20, + 150	^oC

6420-01.TBL

THERMAL DATA

Symbol	Parameter		Value	Unit
$R_{th(j-a)}$	Junction Ambient Thermal Resistance	SHRINK24 SO28	75 75	$^oC/W$

6420-02.TBL

ELECTRICAL CHARACTERISTICS

$T_A = 25^oC$, $V_S = 10V$, $R_L = 10k\Omega$, $R_G = 600\Omega$, f = 1kHz (unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
SUPPLY						
V_S	Supply Voltage		8	9	10.2	V
I_S	Supply Current			5	8	mA
SVR	Ripple Rejection	$V_{IN} = 500mV_{RMS}$, BW = 20 - 20kHz	70	80		dB
MATRIX						
V_{IN}	Input DC Level		4.5	5	5.5	V
R_I	Input Resistance		30	50	100	kΩ
C_S	Channel Separation	$V_{IN} = 2V_{RMS}$ Gain = 0dB f = 1kHz Gain = 6dB	80 70	90 82		dB dB

6420-03.TBL

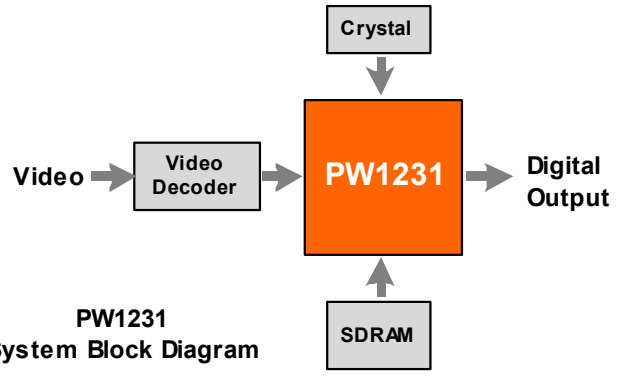
PW1231

Product Specification

General

The PW1231 is a high-quality, digital video signal processor that incorporates Pixelworks' patented deinterlacing, scaling, and video enhancement algorithms. The PW1231 accepts industry-standard video formats and resolutions, and converts the input into any desired output format.The video algorithms are highly efficient, providing excellent quality video.

The PW1231 Video SignalProcessor combines many functions into a single device, including memory controller, auto-configuration, and others. This high level of integration enables simple, flexible, cost-effective solutions featuring fewer required components.



PW1231
System Block Diagram

Features

- Built-In Memory Controller
- Motion-Adaptive Deinterlace Processor
- Intelligent Edge Deinterlacing
- Digital Color/Luminance Transient Improvement (DCTI/DLTI)
- Interlaced Video Input Options, including NTSC and PAL
- Independent horizontal and vertical scaling
- Copy Protection
- Two-Wire Serial Interface

Applications:
For use with Digital Displays

- Flat-Panel (LCD, DLP) TVs
- Rear Projection TVs
- Plasma Displays
- LCD Multimedia Monitors
- Multimedia Projectors

Device	Application	Package
PW1231 PW1231-L	Up to XGA	160-pin PQF

NOTE: "L" denotes lead (Pb) free

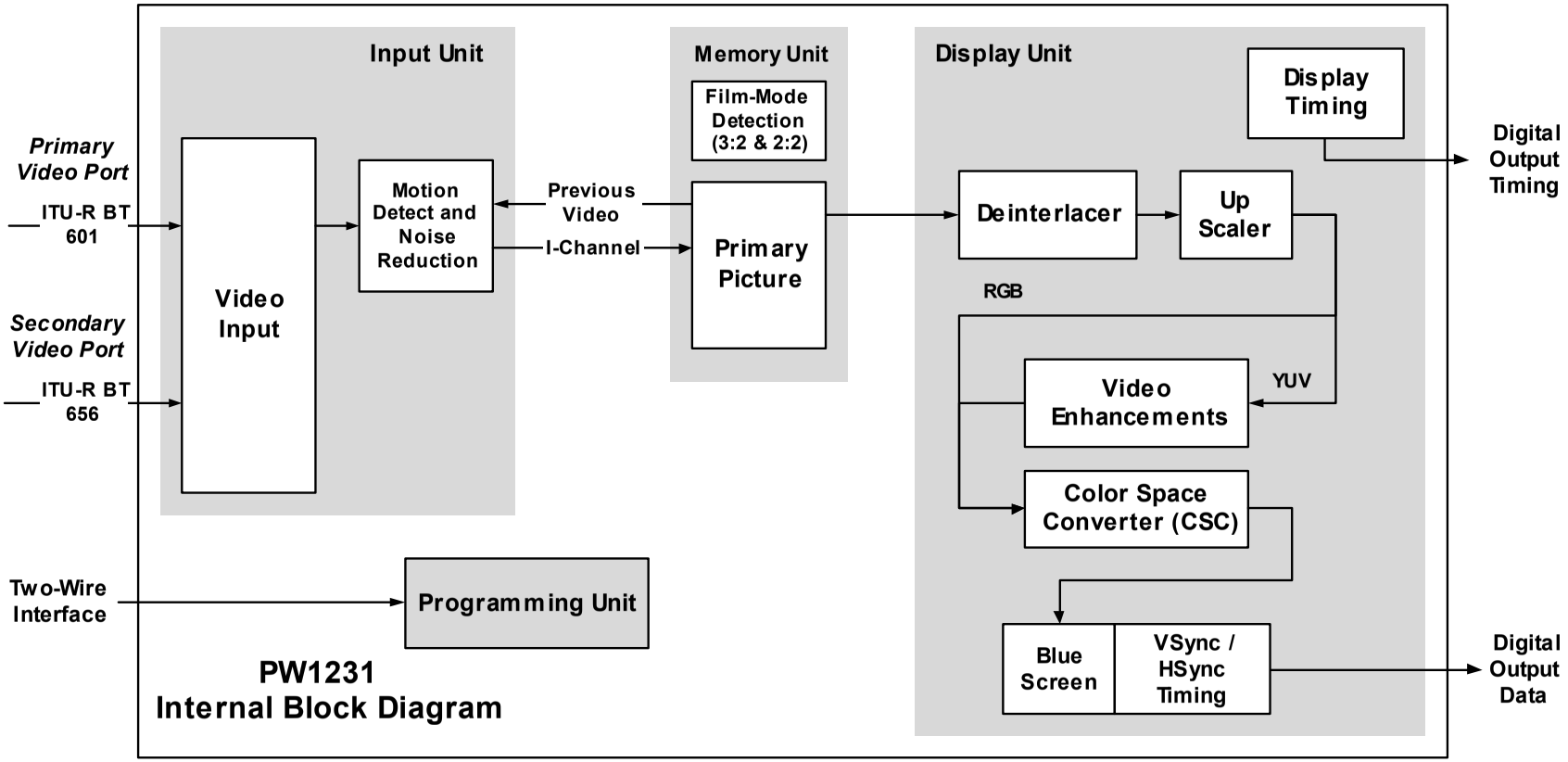


Figure 1-1 Internal Block Diagram

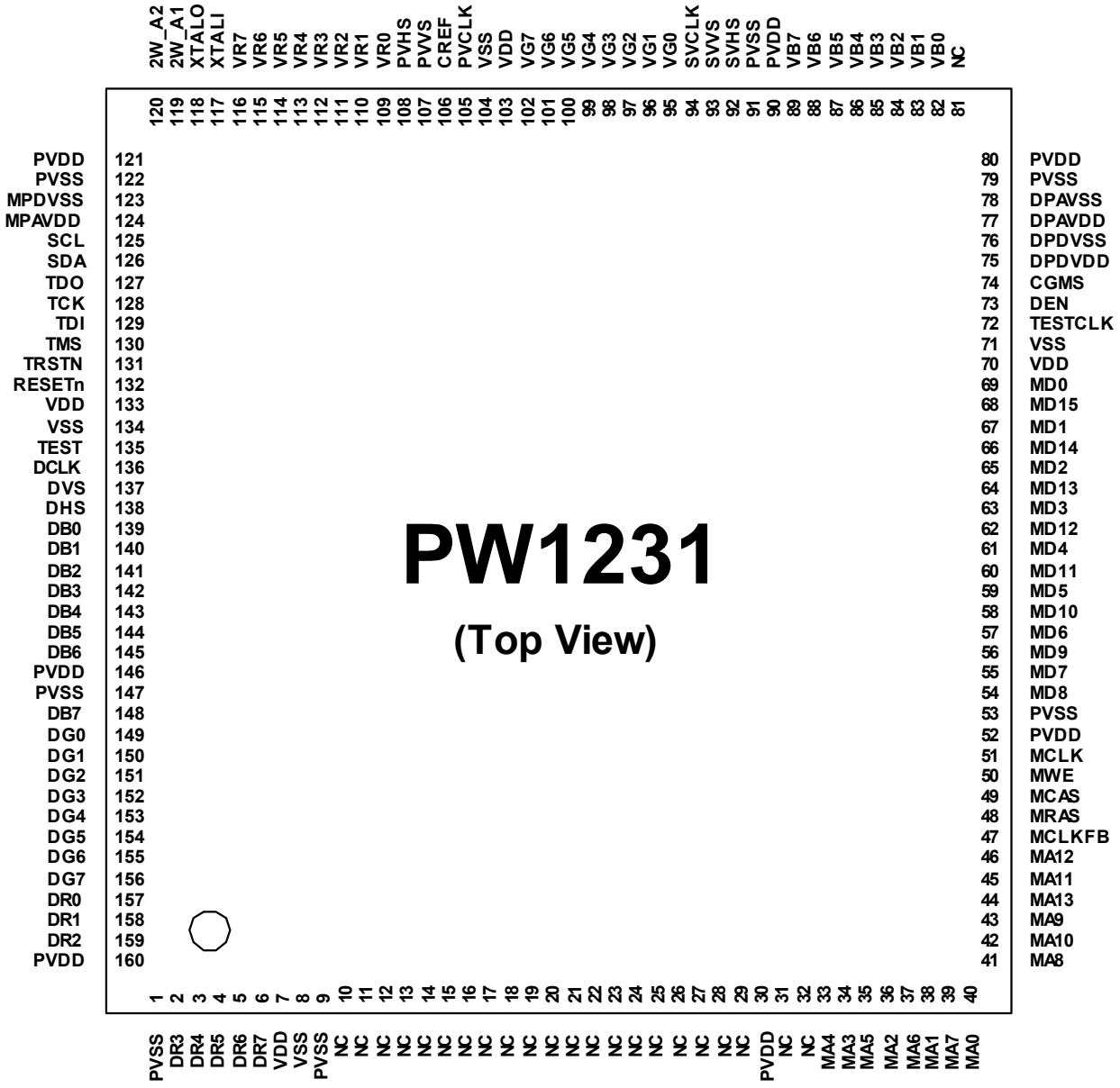


Figure 2-1 PW1231 Pin Layout

PW181

Product Specification

General Description

The PW181 ImageProcessor is a highly integrated "system-on-a-chip" that interfaces computer graphics and video inputs in virtually any format to a fixed-frequency flat panel display.

Computer and video images from NTSC/PAL to WUXGA at virtually any refresh rate can be resized to fit on a fixed-frequency target display device with any resolution up to WUXGA. Video data from 4:3 aspect ratio NTSC or PAL and 16:9 aspect ratio HDTV or SDTV is supported. Multi-region, nonlinear scaling allows these inputs to be resized optimally for the native resolution of the display.

Advanced scaling techniques are supported, such as format conversion using multiple programmable regions. Three independent image scalers coupled with frame locking circuitry and dual programmable color lookup tables create sharp images in multiple windows, without user intervention.

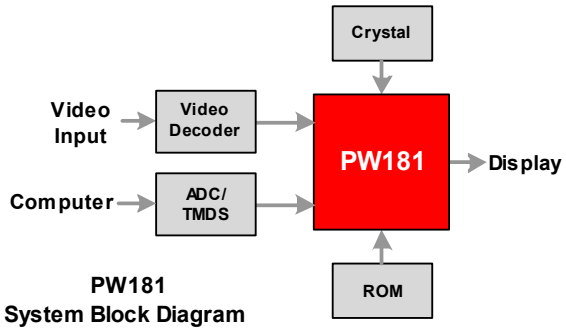
Embedded SDRAM frame buffers and memory controllers perform frame rate conversion and enhanced video processing completely on-chip. A separate memory is dedicated to storage of on-screen display images and CPU general purpose use.

Advanced video processing techniques are supported using the internal frame buffer, including motion adaptive, temporal deinterlacing with film mode detection. When used in combination with the new third-generation scaler, this advanced video processing technology delivers the highest quality video for advanced displays.

Both input ports support integrated DVI 1.0 content protection using standard DVI receivers.

A new advanced OSD Generator with more colors and larger sizes supports more demanding OSD applications, such as on-screen programming guides. When coupled with the new, faster, integrated microprocessor, this OSD Generator supports advanced OSD animation techniques.

Programmable features include the user interface, custom start-up screen, all automatic imaging features, and special screen effects.



PW181
System Block Diagram

Features

- Third-generation, two-dimensional filtering techniques
- Third-generation, advanced scaling techniques
- Second-generation Automatic Image Optimization
- Frame rate conversion
- Video processing
- On-Screen Display (OSD)
- On-chip microprocessor
- JTAG debugger and boundary scan
- Picture-in-picture (PIP)
- Multi-region, non-linear scaling
- Hardware 2-wire serial bus support

Applications

- Multimedia Displays
- Plasma Displays
- Digital Television

Device	Application	Package
PW181-10V	Up to XGA Displays	352 PBGA
PW181-20V	Up to UXGA Displays	
PW181-30V	Up to WUXGA Display	

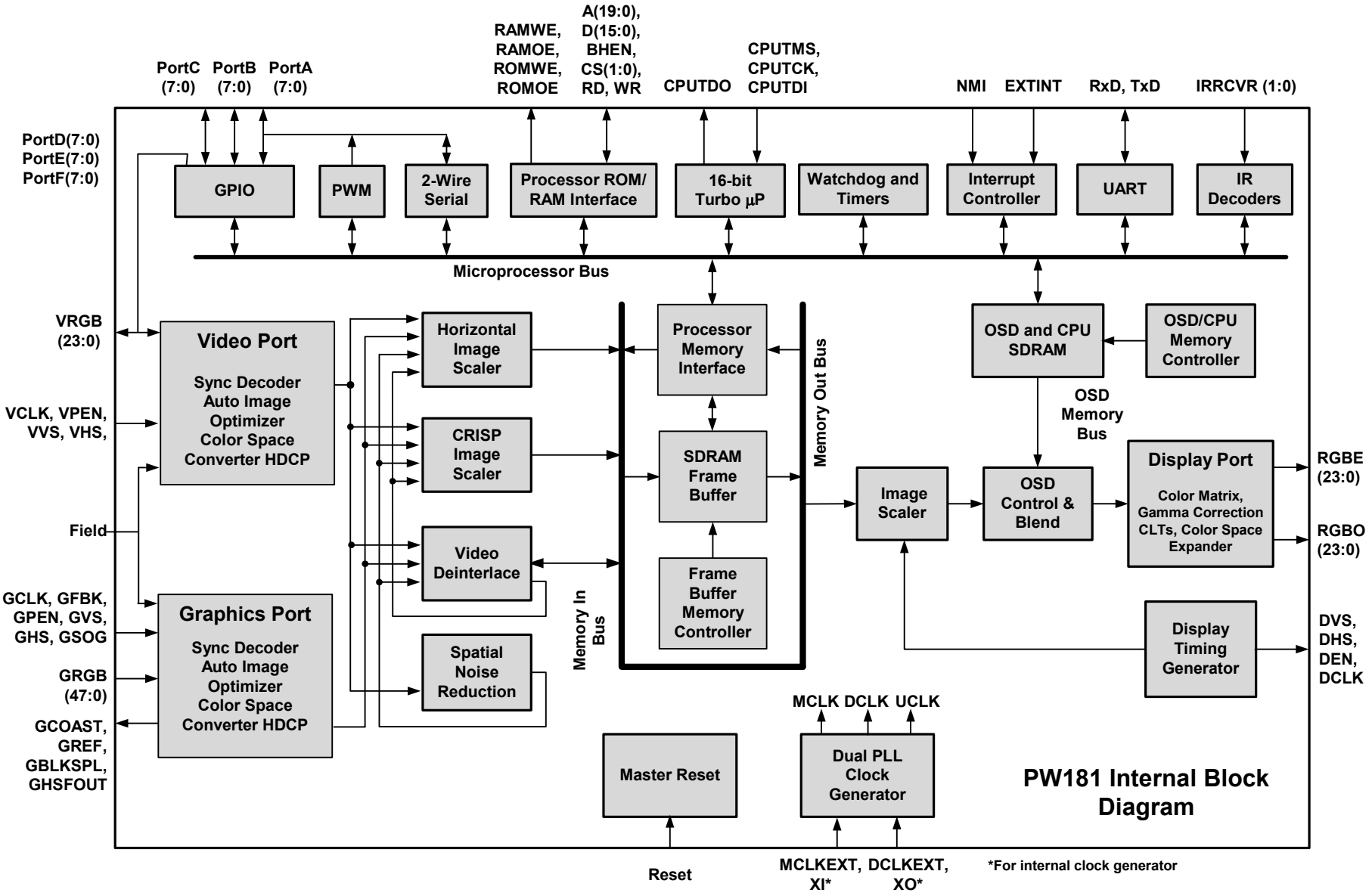


Figure 1-1 Internal Block Diagram

FREQUENCY TABLE (MHz)

Channel	Number	BG	I	DK	L/L'
CH	1		49.75	49.75	47.75
CH	2	48.25	59.25	59.25	55.75
CH	3	55.25	77.25	77.25	60.50
CH	4	62.25	85.25	85.25	63.75
CH	5	175.25	93.25	93.25	176.00
CH	6	182.25	175.25	175.25	184.00
CH	7	189.25	183.25	183.25	192.00
CH	8	196.25	191.25	191.25	200.00
CH	9	203.25	199.25	199.25	208.00
CH	10	210.25	207.25	207.25	216.00
CH	11	217.25	215.25	215.25	189.25
CH	12	224.25	223.25	223.25	182.25
CH	13	53.75	45.75		196.25
CH	14	62.25	53.75		210.25
CH	15	82.25	61.75		
CH	16	175.25	69.75		
CH	17	183.25	95.25		
CH	18	192.25			
CH	19	201.25			
CH	20	210.25			
CH	21	471.25	471.25	471.25	471.25
CH	22	479.25	479.25	479.25	479.25
CH	23	487.25	487.25	487.25	487.25
CH	24	495.25	495.25	495.25	495.25
CH	25	503.25	503.25	503.25	503.25
CH	26	511.25	511.25	511.25	511.25
CH	27	519.25	519.25	519.25	519.25
CH	28	527.25	527.25	527.25	527.25
CH	29	535.25	535.25	535.25	535.25
CH	30	543.25	543.25	543.25	543.25
CH	31	551.25	551.25	551.25	551.25
CH	32	559.25	559.25	559.25	559.25
CH	33	567.25	567.25	567.25	567.25
CH	34	575.25	575.25	575.25	575.25
CH	35	583.25	583.25	583.25	583.25
CH	36	591.25	591.25	591.25	591.25
CH	37	599.25	599.25	599.25	599.25
CH	38	607.25	607.25	607.25	607.25
CH	39	615.25	615.25	615.25	615.25
CH	40	623.25	623.25	623.25	623.25
CH	41	631.25	631.25	631.25	631.25
CH	42	639.25	639.25	639.25	639.25
CH	43	647.25	647.25	647.25	647.25
CH	44	655.25	655.25	655.25	655.25

Channel	Number	BG	I	DK	L/L'
CH	45	663.25	663.25	663.25	663.25
CH	46	671.25	671.25	671.25	671.25
CH	47	679.25	679.25	679.25	679.25
CH	48	687.25	687.25	687.25	687.25
CH	49	695.25	695.25	695.25	695.25
CH	50	703.25	703.25	703.25	703.25
CH	51	711.25	711.25	711.25	711.25
CH	52	719.25	719.25	719.25	719.25
CH	53	727.25	727.25	727.25	727.25
CH	54	735.25	735.25	735.25	735.25
CH	55	743.25	743.25	743.25	743.25
CH	56	751.25	751.25	751.25	751.25
CH	57	759.25	759.25	759.25	759.25
CH	58	767.25	767.25	767.25	767.25
CH	59	775.25	775.25	775.25	775.25
CH	60	783.25	783.25	783.25	783.25
CH	61	791.25	791.25	791.25	791.25
CH	62	799.25	799.25	799.25	799.25
CH	63	807.25	807.25	807.25	807.25
CH	64	815.25	815.25	815.25	815.25
CH	65	823.25	823.25	823.25	823.25
CH	66	831.25	831.25	831.25	831.25
CH	67	839.25	839.25	839.25	839.25
CH	68	847.25	847.25	847.25	847.25
CH	69	855.25	855.25	855.25	855.25
CH	70		863,25		863.25
CH	71		871,25		
CH	72		879,25		
CH	73		887,25		160.00
CH	74	69.25			172.00
CH	75	76.25			220.00
CH	76	83.25			232.00
CH	77	90.25			244.00
CH	78	97.25			256.00
CH	79	59.25			268.00
CH	80	93.25			280.00
S	1	105.25	103.25	103.25	116.75
S	2	112.25	111.25	111.25	128.75
S	3	119.25	119.25	119.25	140.75
S	4	126.25	127.25	127.25	152.75
S	5	133.25	135.25	135.25	164.75
S	6	140.25	143.25	143.25	176.75
S	7	147.25	151.25	151.25	188.75
S	8	154.25	159.25	159.25	200.75
S	9	161.25	167.25	167.25	212.75
S	10	168.25	231.25	231.25	224.75
S	11	231.25	239.25	239.25	236.75
S	12	238.25	247.25	247.25	248.75
S	13	245.25	255.25	255.25	260.75
S	14	252.25	263.25	263.25	272.75

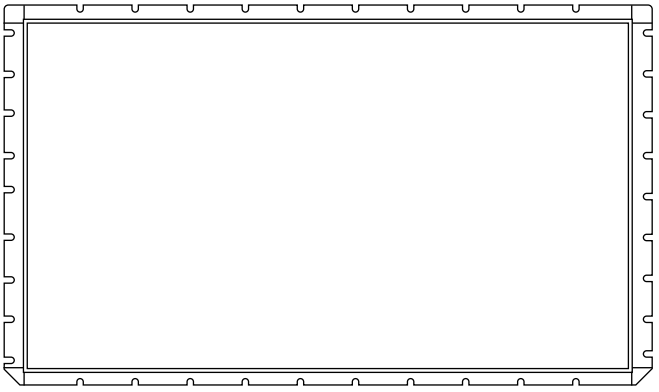
Channel	Number	BG	I	DK	L/L'
S	15	259.25	271.25	271.25	284.75
S	16	266.25	279.25	279.25	296.75
S	17	273.25	287.25	287.25	55.75
S	18	280.25	295.25	295.25	60.50
S	19	287.25	303.25	303.25	63.75
S	20	294.25			
S	21	303.25			303.25
S	22	311.25	311.25	311.25	311.25
S	23	319.25	319.25	319.25	319.25
S	24	327.25	327.25	327.25	327.25
S	25	335.25	335.25	335.25	335.25
S	26	343.25	343.25	343.25	343.25
S	27	351.25	351.25	351.25	351.25
S	28	359.25	359.25	359.25	359.25
S	29	367.25	367.25	367.25	367.25
S	30	375.25	375.25	375.25	375.25
S	31	383.25	383.25	383.25	383.25
S	32	391.25	391.25	391.25	391.25
S	33	399.25	399.25	399.25	399.25
S	34	407.25	407.25	407.25	407.25
S	35	415.25	415.25	415.25	415.25
S	36	423.25	423.25	423.25	423.25
S	37	431.25	431.25	431.25	431.25
S	38	439.25	439.25	439.25	439.25
S	39	447.25	447.25	447.25	447.25
S	40	455.25	455.25	455.25	455.25
S	41	463.25	463.25	463.25	463.25

ORDER NO. PDP0505022C0

Service Manual

High Definition Plasma Display Module

MD-42HM8 SERIES



Specifications

Power Source	AC 100 - 240 V, 50/60 Hz
Plasma Display panel	Drive method : AC type 42-inch, 16 : 9 aspect ratio
Screen Size	Approx. 36 $^{7}/_{32}$ " (921mm) (W) × 20 $^{25}/_{64}$ " (518 mm) (H) × 41 $^{37}/_{64}$ " (1056 mm) (diagonal)
No. of Pixels	786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]
Mass (Weight)	18.5 kg
Operating Condition	
Temperature	32˚F - 104˚F (0˚C - 40˚C)
Humidity	20% - 80%

Note:

Design and Specifications are subject to change without notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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CONTENTS

Page

1 Safety Precautions ··· **3**
1.1. General Guidelines ··· 3
2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices ··· **4**
3 About lead free solder (PbF) ··· **5**
4 How to read Model Number ··· **6**
5 PCB Structure & List ··· **7**
6 Set Serial Label Information ··· **8**
7 Trouble shooting guide ··· **9**
7.1. How to identify SOS Blinking Signal ··· 9
7.2. Timing Chart of LED Blinking ··· 9
7.3. How to Display Internal Test pattern ··· 10
7.4. Local screen failure ··· 11
8 Adjustment Procedure ··· **12**
8.1. Driver Set-up ··· 12
8.2. Initialization Pulse Adjust ··· 13
8.3. P.C.B. (Printed Circuit Board) exchange ··· 14
8.4. Adjustment Volume Location ··· 14
8.5. Test Point Location ··· 14
9 Conductor View ··· **15**
9.1. P-Board ··· 15
9.2. D-Board ··· 18
9.3. C1-Board ··· 21
9.4. C2-Board ··· 22
9.5. C3-Board ··· 23
9.6. C4-Board ··· 24
9.7. SC-Board ··· 25
9.8. SU-Board ··· 28
9.9. SD-Board ··· 29
9.10. SS-Board ··· 30
10 Block and Schematic Diagram ··· **33**
10.1. Schematic Diagram Notes ··· 33
10.2. Main Block Diagram ··· 34
10.3. P-Board Block Diagram ··· 35

Page

10.4. P-Board (1 of 2) Schematic Diagram ··· 36
10.5. P-Board (2 of 2) Schematic Diagram ··· 37
10.6. D-Board Block Diagram ··· 38
10.7. D-Board (1 of 6) Schematic Diagram ··· 39
10.8. D-Board (2 of 6) Schematic Diagram ··· 40
10.9. D-Board (3 of 6) Schematic Diagram ··· 41
10.10. D-Board (4 of 6) Schematic Diagram ··· 42
10.11. D-Board (5 of 6) Schematic Diagram ··· 43
10.12. D-Board (6 of 6) Schematic Diagram ··· 44
10.13. C1, C2, C3 and C4-Board Block Diagram ··· 45
10.14. C1-Board (1 of 2) Schematic Diagram ··· 46
10.15. C1-Board (2 of 2) Schematic Diagram ··· 47
10.16. C2-Board (1 of 2) Schematic Diagram ··· 48
10.17. C2-Board (2 of 2) Schematic Diagram ··· 49
10.18. C3-Board (1 of 2) Schematic Diagram ··· 50
10.19. C3-Board (2 of 2) Schematic Diagram ··· 51
10.20. C4-Board (1 of 2) Schematic Diagram ··· 52
10.21. C4-Board (2 of 2) Schematic Diagram ··· 53
10.22. SC-Board Block Diagram ··· 54
10.23. SC-Board (1 of 2) Schematic Diagram ··· 55
10.24. SC-Board (2 of 2) Schematic Diagram ··· 56
10.25. SU-Board Block Diagram ··· 57
10.26. SU-Board (1 of 2) Schematic Diagram ··· 58
10.27. SU-Board (2 of 2) Schematic Diagram ··· 59
10.28. SD-Board Block Diagram ··· 60
10.29. SD-Board (1 of 2) Schematic Diagram ··· 61
10.30. SD-Board (2 of 2) Schematic Diagram ··· 62
10.31. SS, SS2 and SS3-Board Block Diagram ··· 63
10.32. SS, SS2 and SS3-Board Schematic Diagram ··· 64
11 Replacement Parts List ··· **65**
11.1. Replacement Parts List Notes ··· 65
11.2. Mechanical Replacement Parts List ··· 66
11.3. Electrical Replacement Parts List ··· 67

1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

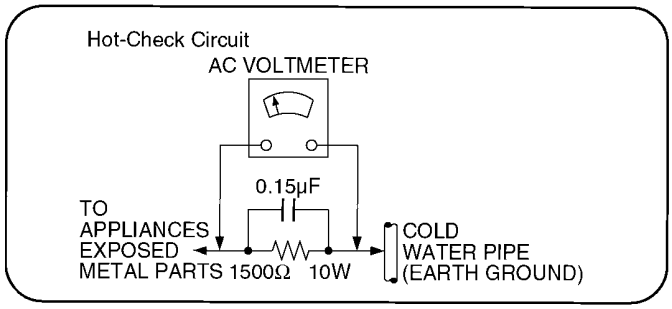


Figure 1

1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3 About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

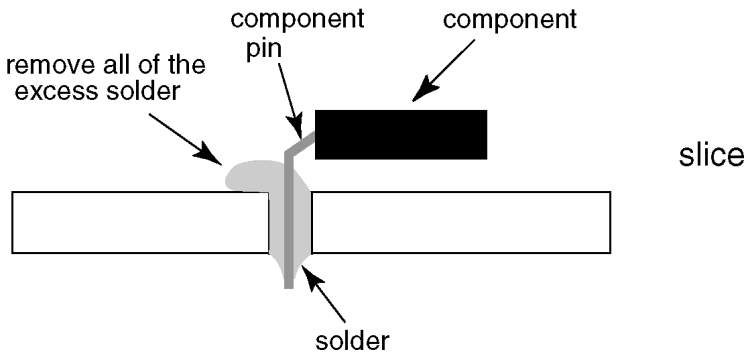
This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol (PbF) stamped on the back of PCB.

Caution

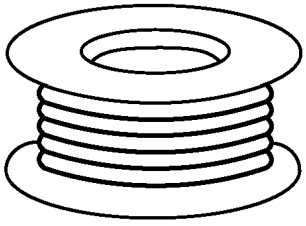
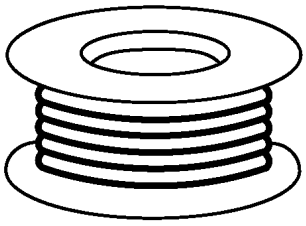
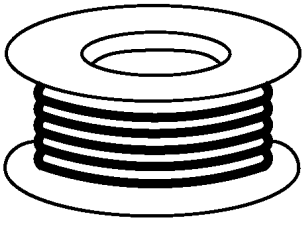
- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40 °C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).

  If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.

0.3mm X 100g	0.6mm X 100g	1.0mm X 100g
		

4 How to read Model Number

(Example) MD-42HM8ASSJ

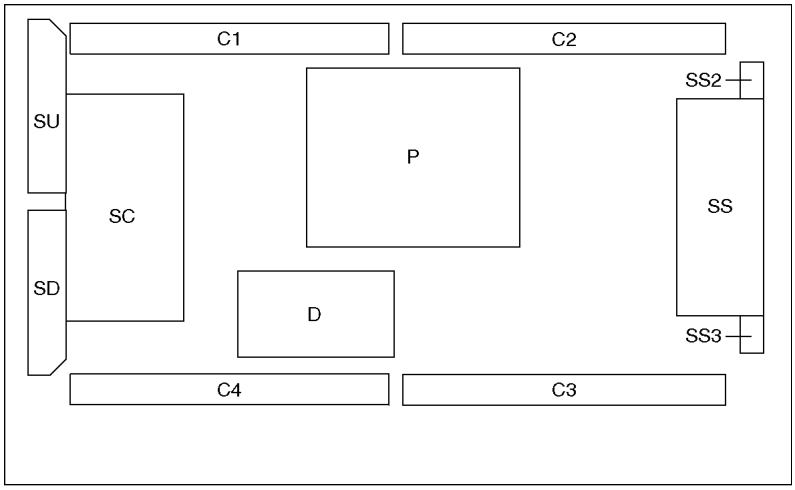
①		②	③	④	⑤	⑥	⑦	⑧
MD	–	42	HM	8	A	S	S	J

①	PDP Module
②	Size of PDP Panel * 37 : 37 inch * 42 : 42 inch * 50 : 50 inch * 65 : 65 inch
③	Type of PDP Panel * M : Standard Panel * HM : High Definition Panel
④	Version Number * 5 : 2002 model * 6 : 2003 model * 7 : 2004 model * 8 : 2005 model
⑤	Type of Power Supply Circuit * A : with Power Supply Circuit (Board) * B : without Power Supply Circuit (Board)
⑥	Type of PDP Module * S : Standard
⑦	Type of Packing Materials (for transportation) * N : One way Packing * R : Returnable Packing * S : Single Packing
⑧	Country of Origin * : J : Japan

Note

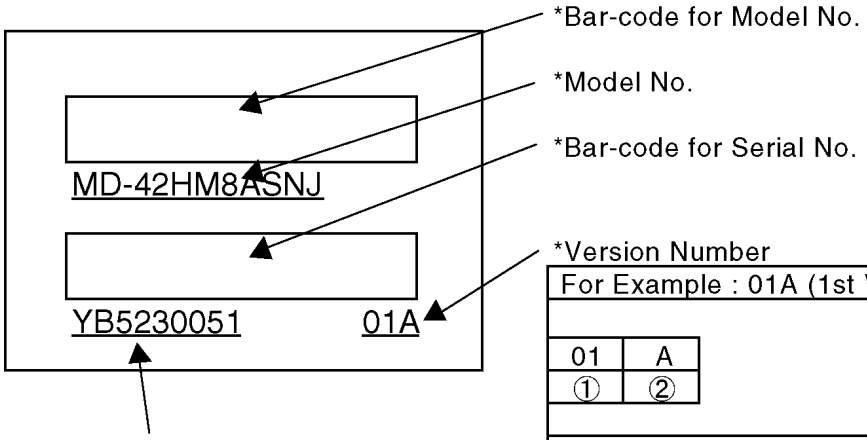
1. This Service Manual has made based on Model No. (MD-42HM8ASSJ).
   So, the information of Power Supply Circuit is included in Circuit Board Diagram, Schematic Diagram and Parts List.
2. The packing materials for only Single Packing Type are supplied as spare parts. (The packing materials for One way and Returnable type are not supplied as spare parts.)

5 PCB Structure & List



	Board Name	Parts Number	Function	Applicable Model Number		Recommend	Remakrs
				MD-42HM8ASSJ MD-42HM8ASRJ MD-42HM8ASNJ	MD-42HM8BSSJ MD-42HM8BSRJ MD-42HM8BSNJ		
1	D	TZTNP01YJSR	Interface & Digital Process	○	○	1	
2	SS	TNPA3558	Sustain Drive	○	○	1	
3	SC	TNPA3557	Scan Drive	○	○	1	
4	SU	TNPA3189AB	Scan Drive Output (Upper)	○	○	1	
5	SD	TNPA3190AB	Scan Drive Output (Lower)	○	○	1	
6	C1	TNPA3553AB	Data Drive (Upper Left)	○	○		
7	C2	TNPA3554AB	Data Drive (Upper Right)	○	○		
8	C3	TNPA3555	Data Drive (Lower Right)	○	○		
9	C4	TNPA3556	Data Drive (Lower Left)	○	○		
10	SS2	TNPA3675	Sustain Connector (Upper)	○	○		
11	SS3	TNPA3676	Sustain Connector (Lower)	○	○		
12	P	ETXMM563MDK	Power Supply	○	NONE	1	

6 Set Serial Label Information



*Serial Number

For Example : YB5230051

YB	5	2	3	0051
①	②	③	④	⑤

① No. of Production Line

② Production Year
* 4 : 2004
* 5 : 2005
* 6 : 2006

③ Production Month
* 1 : JAN - FEB
* 2 : MAR - APR
* 3 : MAY - JUN
* 4 : JLY - AUG
* 5 : SEP - OCT
* 6 : NOV - DEC

④ Production Period (Day)
* 1 : BEG (1 - 10)
* 2 : MID (11 - 20)
* 3 : END (21 - 31)
* 4 : BEG (1 - 10)
* 5 : MID (11 - 20)
* 6 : END (21 - 31)

⑤ Serial Number
From 0001 ---

*Version Number

For Example : 01A (1st Version)

01	A
①	②

① Process Version Number
*Version Number will be changed if the production process has been changed but it has no effect on the function.

② Function Version Code
*Version Code will be changed if set characteristics or function has been changed.

7 Trouble shooting guide

7.1. How to identify SOS Blinking Signal

[Function]

When an abnormality has occurred in the PDP module, the protection circuit operates and reset to the stand-by mode. At the same time, the defective P.C.Board can be indicated by the number of the pulse at Pin 3(LED_R) of D8 connector on D8 Board.

By using this tool (V1 board), the indication of pulse is shown to the blinking of red LED.

(Pluse High = LED light, Pulse Low = LED light off)

Tool name	Part number	Supply period	Supply route
V1 board	TNPA3199	until end of DEC ./2005	Normal spare part route (chargeable)
Lead Wire (D8-V34)	TXJV340MMS	until end of DEC ./2005	Normal spare part route (chargeable)

[How to check]

Connect the V1 board to D8 connector on D board, and turn on the power (SS34) of PDP module.

If power is shut down by protection circuit, the red LED of V1 board will be shown as blinking.

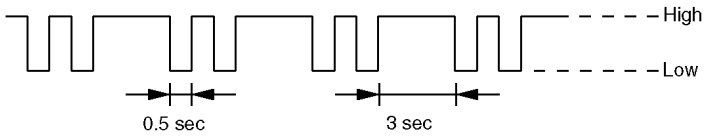
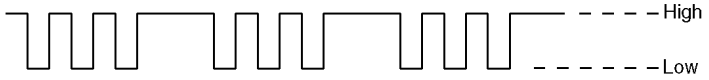
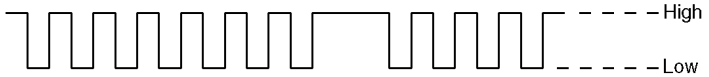
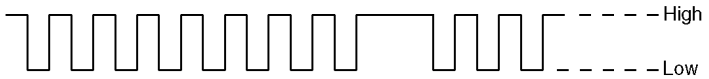
(Refer to Fig. A)

(If the unit keeps power on, the green LED of V1 board will be lighting.)

7.2. Timing Chart of LED Blinking

1. Subject

Information of LED Blinking timing chart.

No. of Pulse	Signal timing	Contents & Check point
2		12V SOS (P Board)
3		3.3V SOS (D-Board)
4		Power SOS (P Board)
5		5V SOS (D Board)
6		Driver SOS1 (SC Board)
7		Driver SOS2 (SU,SD,SC Board)
8		Driver SOS3 (SS Board)
9		FPGA Config (D Board)

7.3. How to Display Internal Test pattern

[Function]

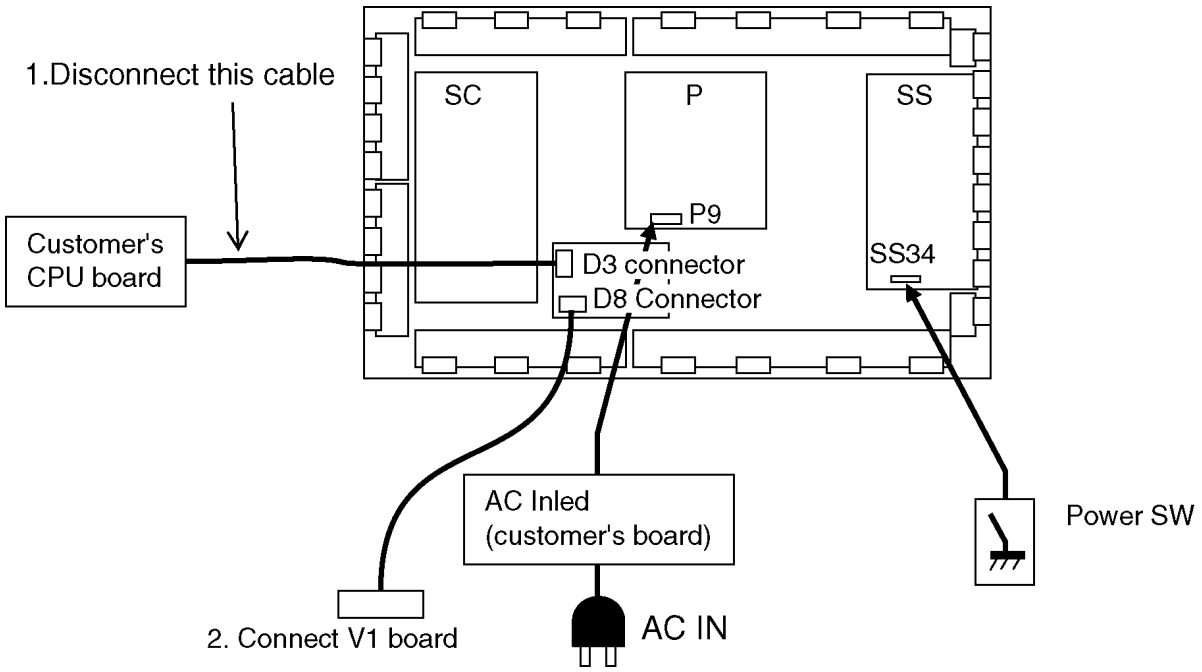
To display some Internal test pattern on screen without signal input in order to check defect symptom.

Tool name	Part number	Supply period	Supply route
Remote Controller	EUR646529	until end of DEC ./2005	Normal spare part route (chargeable)

V1 board TNPA3199 is necessary to receive command from remote controller.

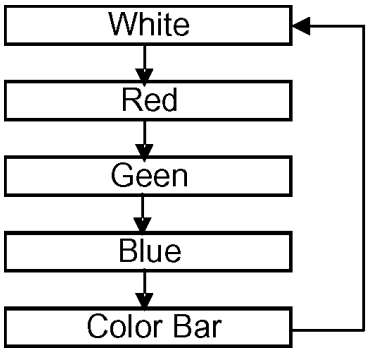
[Check condition]

1. Disconnect the cable(D3 connector) from D baord.
   (*This function doesn't work when D3 connector connected.)
2. Connect the V1 board to D8 connector on D board.



[How to use]

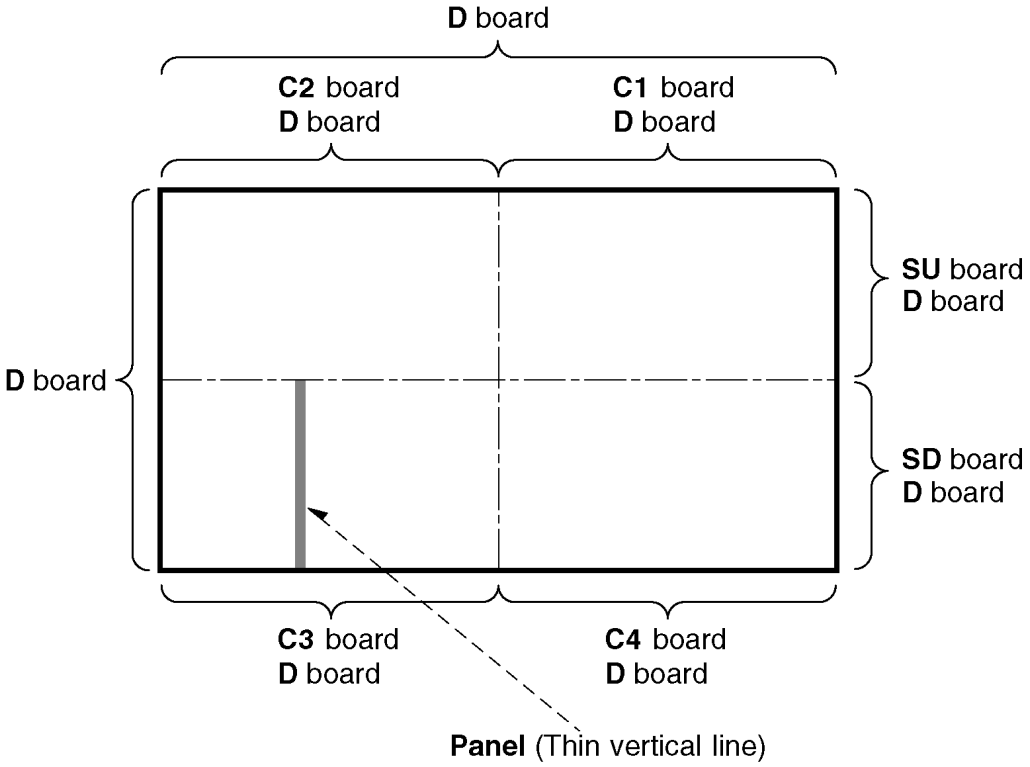
1. Press the Position button (UP), then press Status button for 3 times with-in 2 seconds.
   White pattern is displayed on the screen.
2. After that, press Action button to change the test pattern as follows.



3. Press the R button to exit internal test pattern mode.

7.4. Local screen failure

Plasma display may have local area failure on the screen. Fig - 1 is the possible defect P.C.B. for each local area.



<Local screen failure chart>

8 Adjustment Procedure

8.1. Driver Set-up

8.1.1. Item / Preparation

1. Input an APL 100 % white signal.

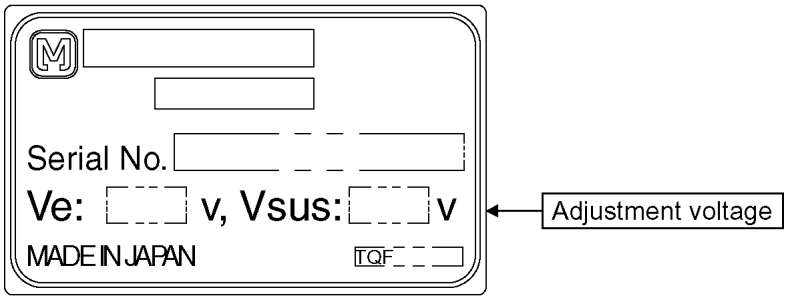
8.1.2. Adjustments

Adjust driver section voltages referring the panel data on the panel data label.

Name	Test Point	Voltage	Volume	Remarks
Vsus	TPVSUS (SS)	Vsus ± 2V	VR351 (P)	*
Ve	TPVE (SS)	Ve ± 1V	VR6145 (SS)	*
Vset	TPVSET (SC)	240V ± 7V	Fixed	
Vad	TPVAD (SC)	-105V ± 1V	VR6477 (SC)	
Vscn	TPVSCN (SC)	Vad + 130V ± 4V	Fixed	
Vda	TPVDA (SS)	70V ± 1V	Fixed	

*See the Panel label.

Panel Label information

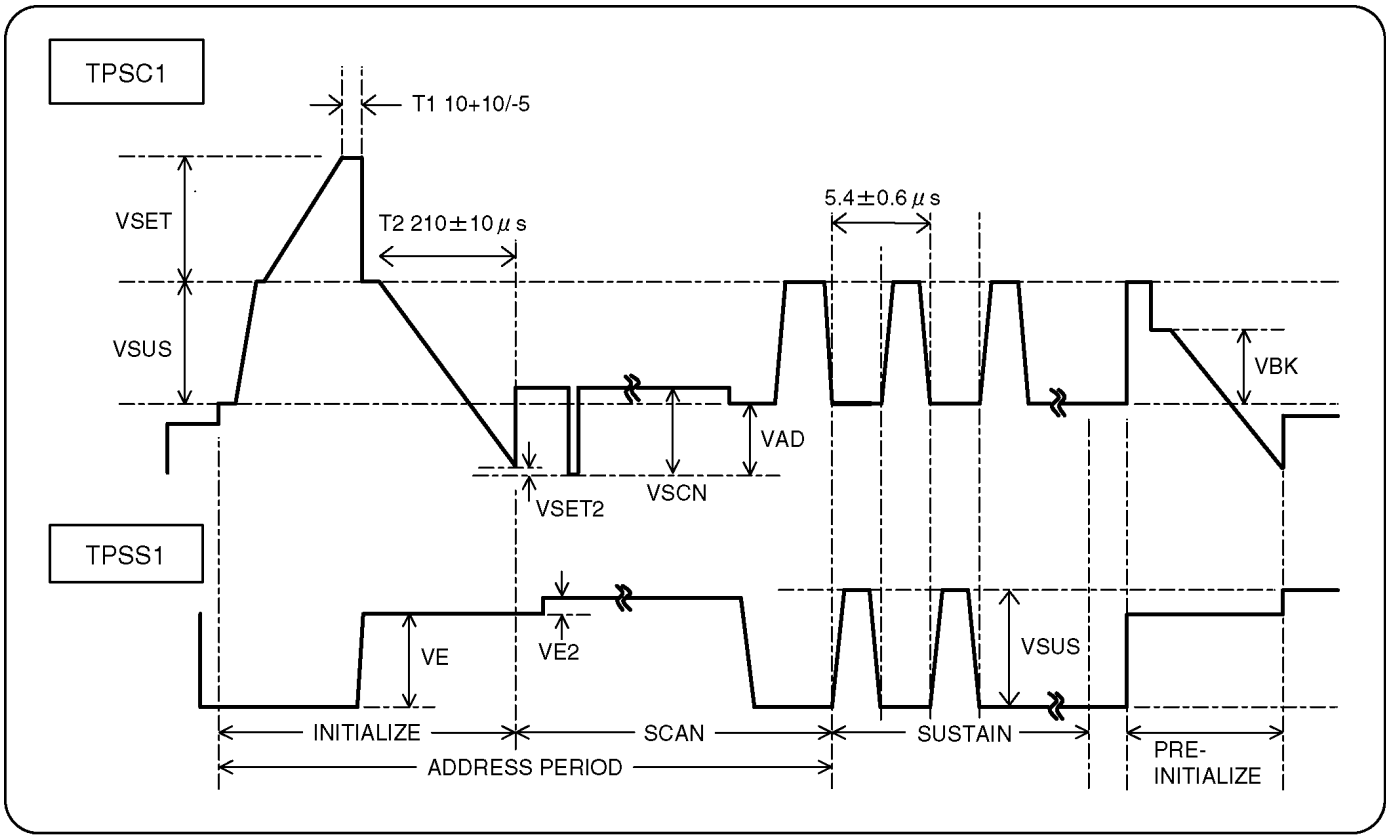


8.2. Initialization Pulse Adjust

1. Input a Cross hatch signal.

Adjust the indicated test point for the specified wave form.

	Test point	Volume	Level
T1	TPSC1 (SC)	---	10 ± 10 / - 5 Sec
T2	TPSC1 (SC)	VR6557 (SC)	210 ± 10μ Sec



8.3. P.C.B. (Printed Circuit Board) exchange

8.3.1. Caution

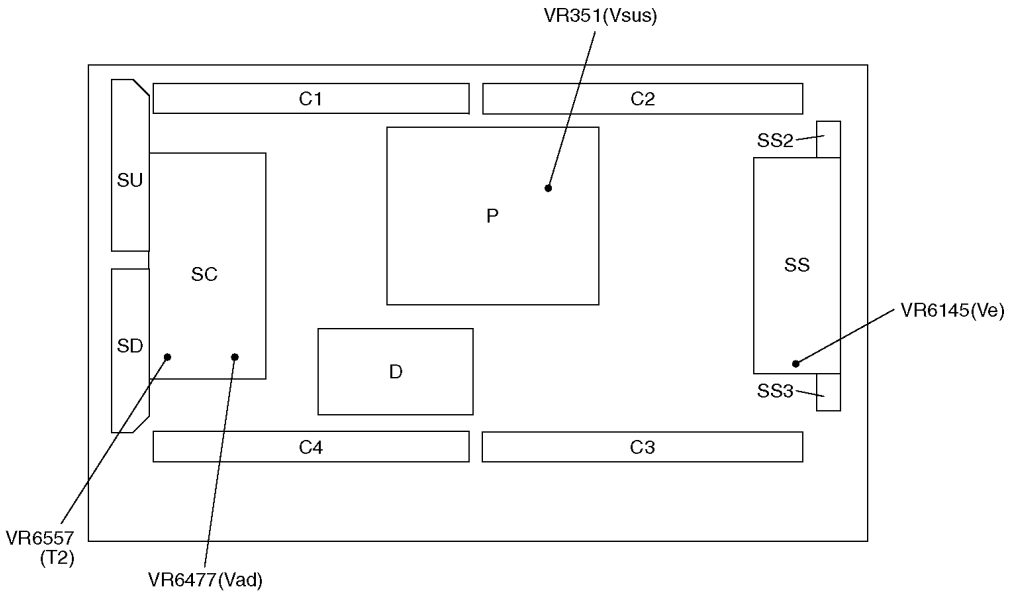
1. To remove P.C.B. , wait 1 minute after power was off for discharge from electrolysis capacitors.

8.3.2. Quick adjustment after P.C.B. exchange

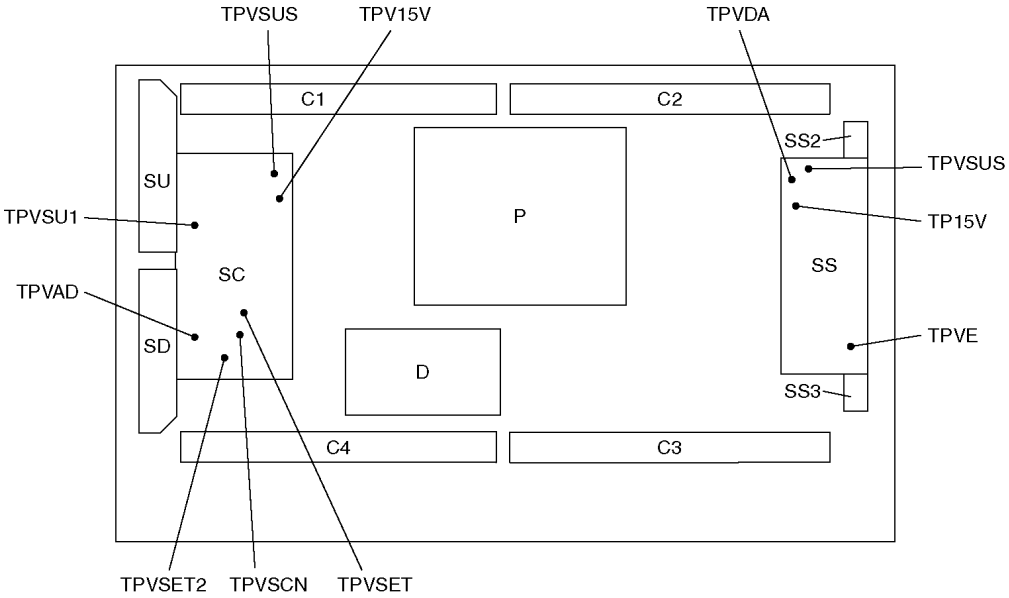
P.C.B.	Name	Test Point	Voltage	Volume	Remarks
P Board	Vsus	TPVSUS (SS)	Vsus ± 2V	VR351 (P)	*
SC Board	Vad	TPVAD (SC)	-105V ± 1V	VR6477(SC)	
SS Board	Ve	TPVE (SS)	Ve ± 1V	VR6145 (SS)	*

*See the Panel label.

8.4. Adjustment Volume Location



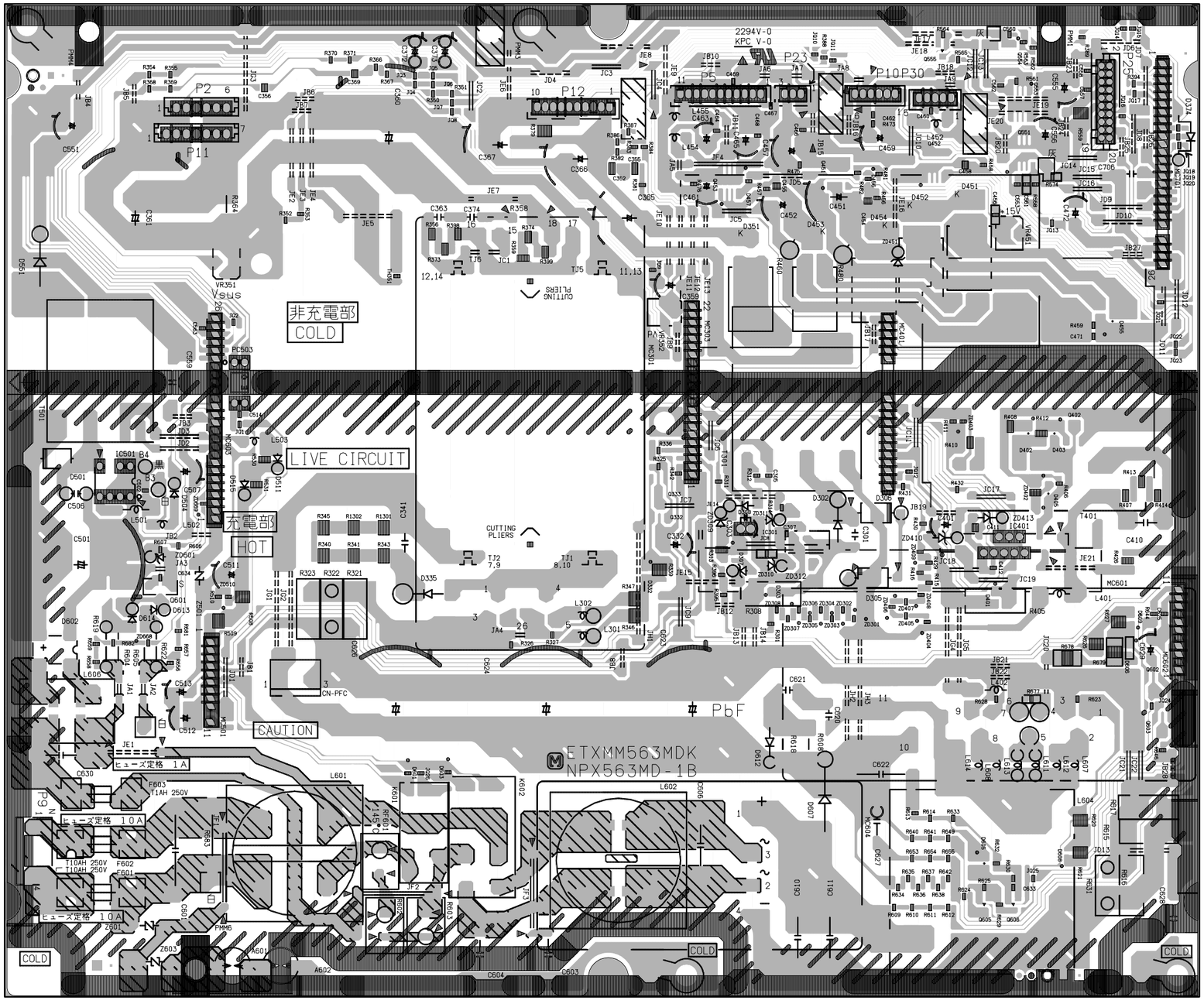
8.5. Test Point Location



9 Conductor View

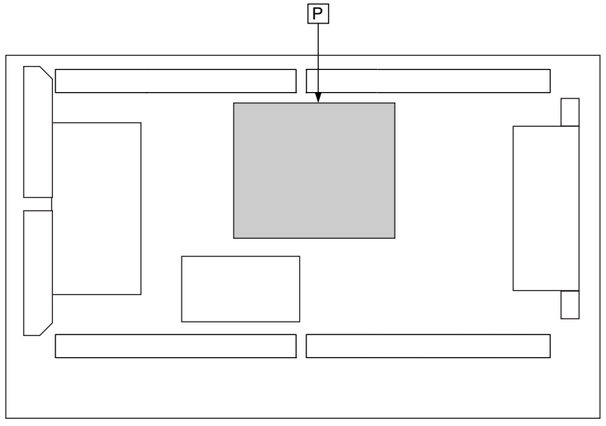
9.1. P-Board

P-BOARD (FOIL SIDE)
ETXMM563MDK



MD-42HM8 SERIES
P-BOARD ETXMM563MDK

MD-42HM8 SERIES
P-BOARD ETXMM563MDK



Parts Location

P-BOARD (FOIL SIDE)			
IC		**TRANSISTOR**	
IC301	E-3	Q332	E-3
IC401	G-3	Q333	E-3
IC501	B-3	Q402	G-4
MC301	D-4	Q451	F-5
MC303	E-4	Q453	E-5
MC401	F-4	Q551	G-5
MC501	B-2	Q554	G-6
MC601	G-2	Q555	F-6
MC602	H-3	Q555	G-6
MC603	C-4	Q602	H-3
MC604	E-1	Q603	H-2
MC701	H-5	Q605	G-1
		Q606	G-1

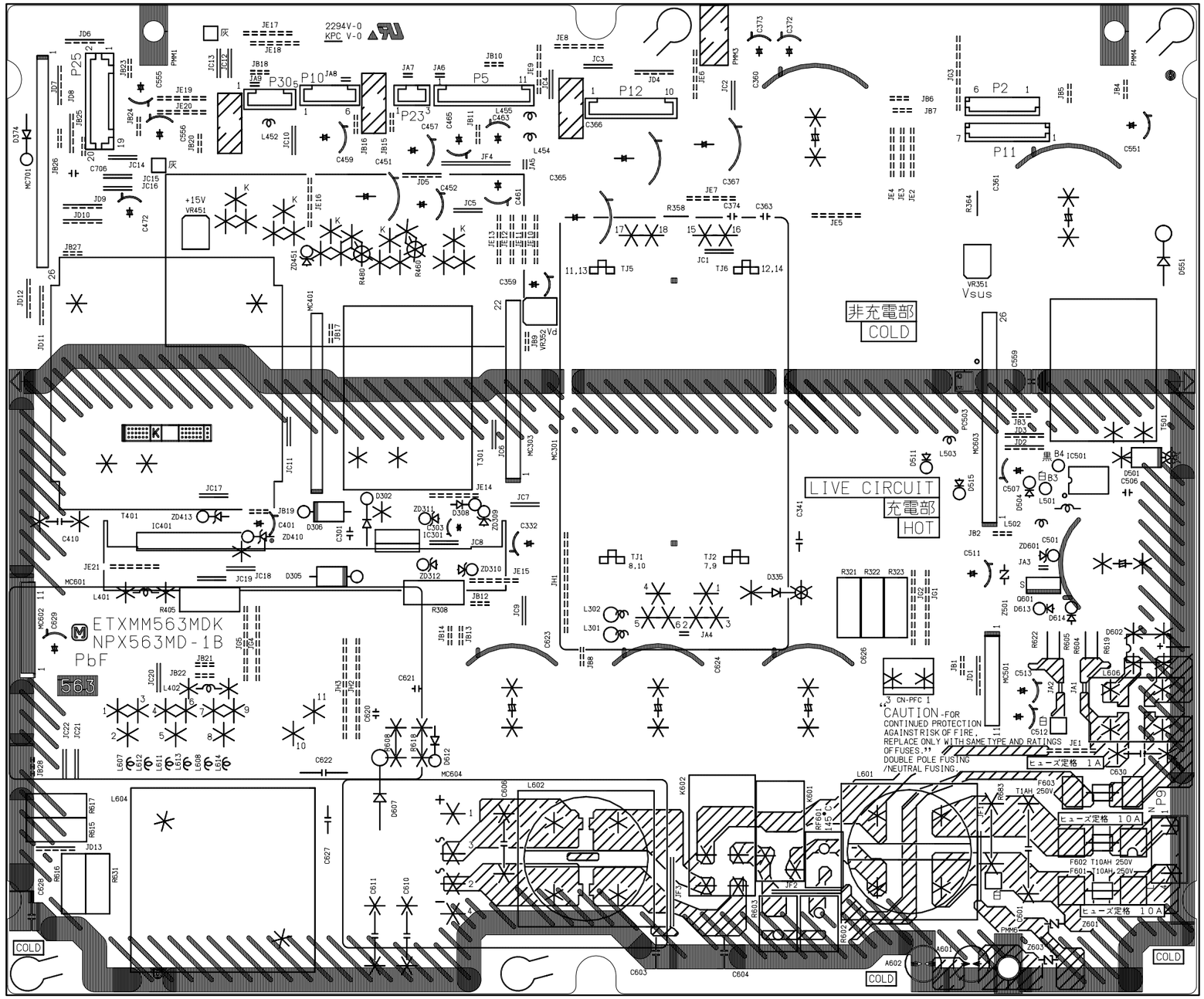
MD-42HM8 SERIES
P-BOARD PARTS LOCATION

Parts Location

P-BOARD (COMPONENT SIDE)			
IC		**TRANSISTOR**	
IC301	C-3	Q601	G-3
IC401	B-3		
IC501	G-3		
MC301	E-4		
MC303	D-4		
MC401	C-4		
MC501	G-2		
MC601	B-2		
MC602	A-3		
MC603	G-4		
MC604	D-1		
MC701	A-5		

MD-42HM8 SERIES
P-BOARD PARTS LOCATION

P-BOARD (COMPONENT SIDE)
ETXMM563MDK


ETXMM563MDK
NPX563MD-1B
PbF
563
2294V-0
KPC V-0
灰
+15V
VR451
Vsus
VR351
Vd
VR352
非充電部
COLD
LIVE CIRCUIT
充電部
HOT
CN-PFC 1
CAUTION-FOR CONTINUED PROTECTION AGAINSTRISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSES."
DOUBLE POLE FUSING /NEUTRAL FUSING.
ヒューズ定格 1A
ヒューズ定格 10A
F603 T1AH 250V
F602 T10AH 250V
F601 T10AH 250V
P25
P30
P10
P23
P5
P12
P2
P11
IC401
IC501
L401
L402
L501
L502
L503
L601
L602
L606
T301
T401
Z601
Z603
A601
A602
TJ1 8,10
TJ2 7,9
TJ5 11,13
TJ6 12,14
JC1 15,16,17,18
JF1
JF2
JF3
JF4
JF5
JH1
JH2
JH3
JH4
JH5
JG1
JG2
JA1
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PMM3
PMM4
PMM5
PMM6
MC301
MC303
MC401
MC501
MC601
MC602
MC603
MC604
D306
D308
D335
D501
D506
D511
D515
D551
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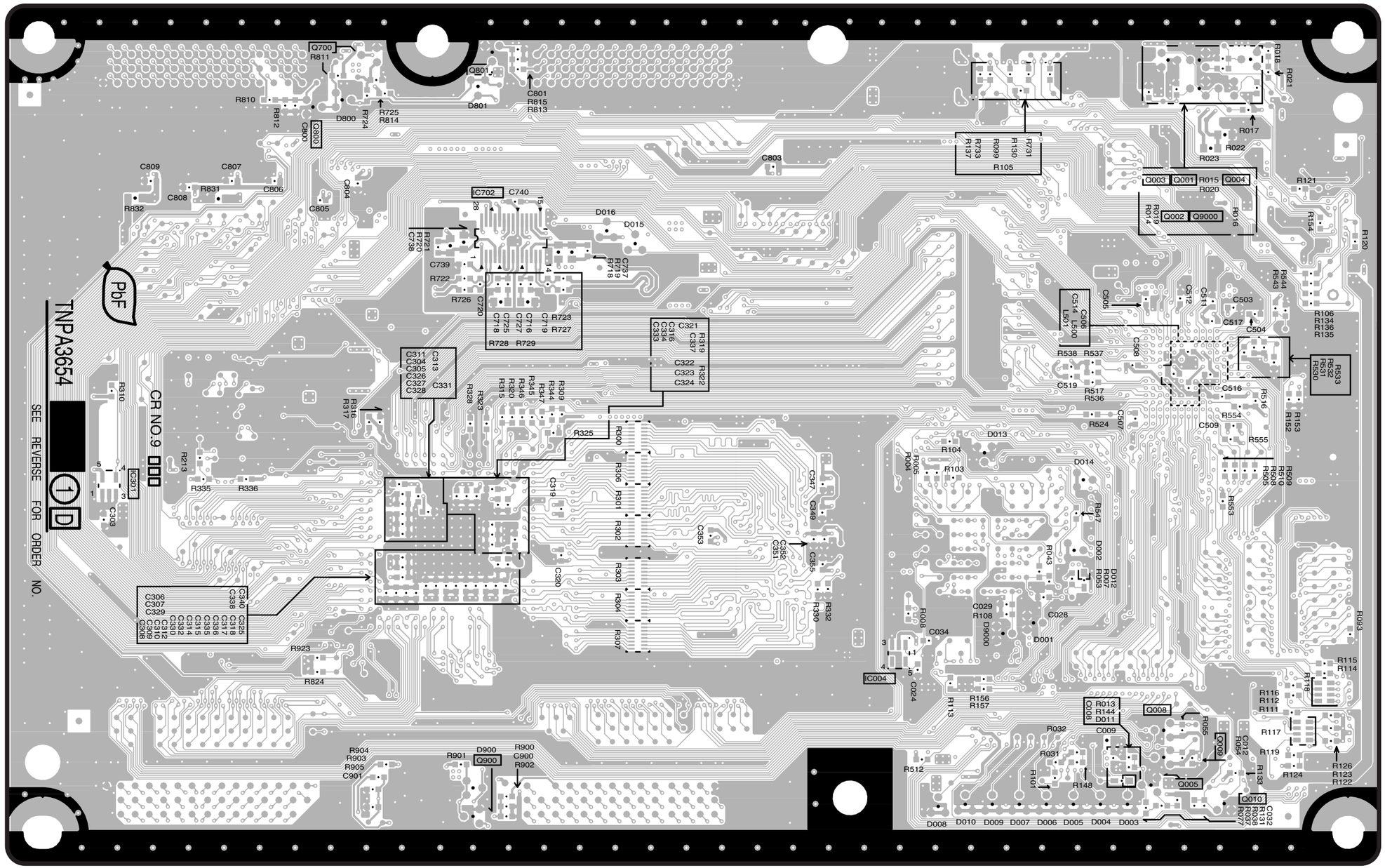
D661

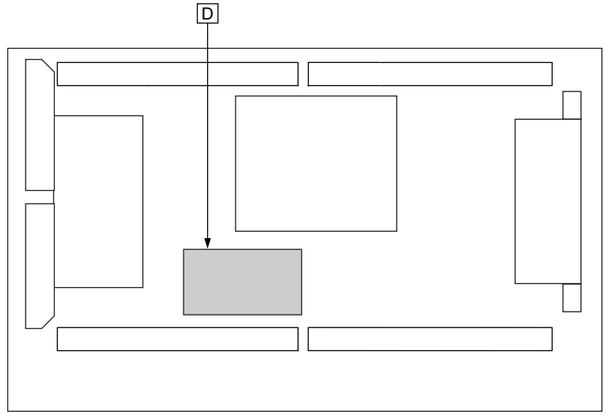
9.2. D-Board

DBOARD (FOIL SIDE)
TZTNP01YJSR



MD-42HM8 SERIES
D-BOARD TZTNP01YJSR

MD-42HM8 SERIES
D-BOARD TZTNP01YJSR



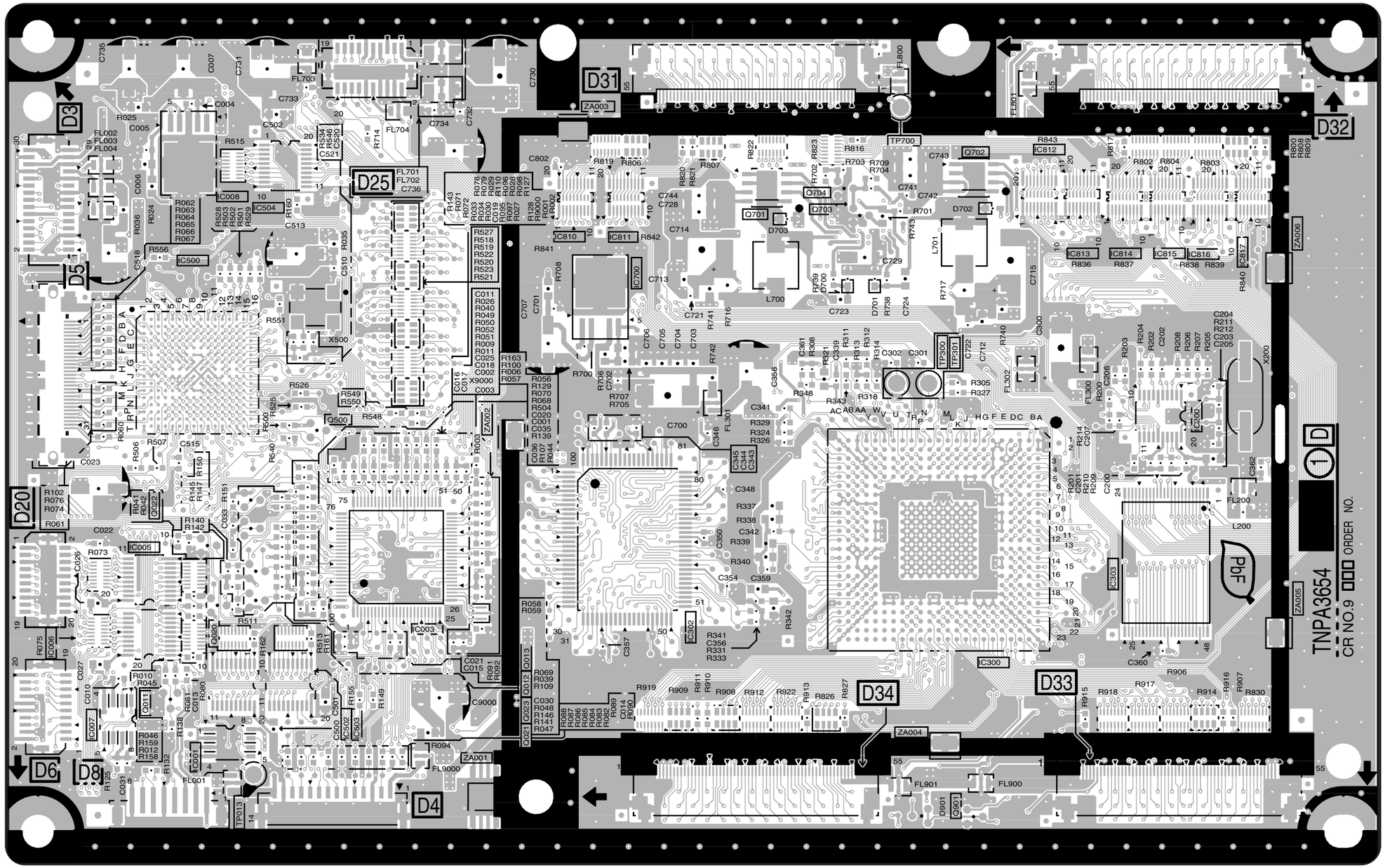
Parts Location

D-BOARD (FOIL SIDE)			
IC		**TRANSISTOR**	
IC9004	F-2	Q9000	H-5
IC9301	B-3	Q9001	H-5
IC9702	D-5	Q9002	H-5
		Q9003	H-5
		Q9004	H-5
		Q9005	H-1
		Q9008	H-2
		Q9009	H-1
		Q9010	H-1
		Q9700	C-6
		Q9800	C-5
		Q9801	D-6
		Q9900	D-1

Parts Location

D-BOARD (COMPONENT SIDE)					
IC		**TRANSISTOR**		**TP**	
IC9001	B-1	Q9011	B-2	TP013	B-1
IC9003	C-2	Q9012	D-2	TP300	F-4
IC9005	B-3	Q9013	D-2	TP301	G-4
IC9006	A-2	Q9020	B-2	TP700	F-5
IC9007	A-1	Q9021	D-2		
IC9008	B-5	Q9022	B-3		
IC9200	H-4	Q9023	D-2		
IC9300	G-2	Q9500	C-4		
IC9302	E-2	Q9701	E-5		
IC9303	G-2	Q9702	G-5		
IC9500	B-4	Q9703	F-5		
IC9502	C-2	Q9704	F-5		
IC9503	C-2	Q9901	G-1		
IC9504	B-5				
IC9700	E-4				
IC9810	D-4				
IC9811	E-5				
IC9812	G-5				
IC9813	G-4				
IC9814	H-4				
IC9815	H-4				
IC9816	H-4				
IC9817	H-4				

D-BOARD (COMPONENT SIDE)
TZTNP01YJSR



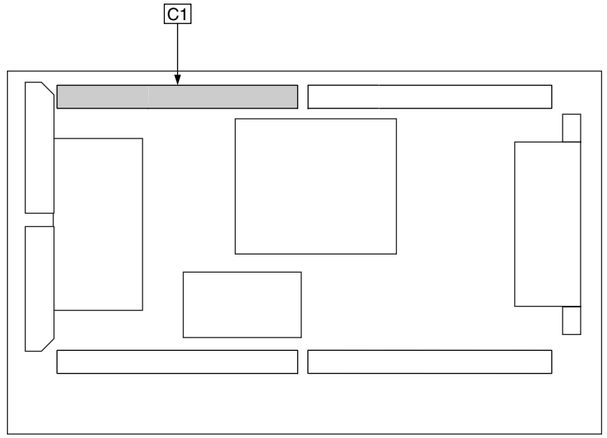
MD-42HM8 SERIES
D-BOARD TZTNP01YJSR

MD-42HM8 SERIES
D-BOARD TZTNP01YJSR

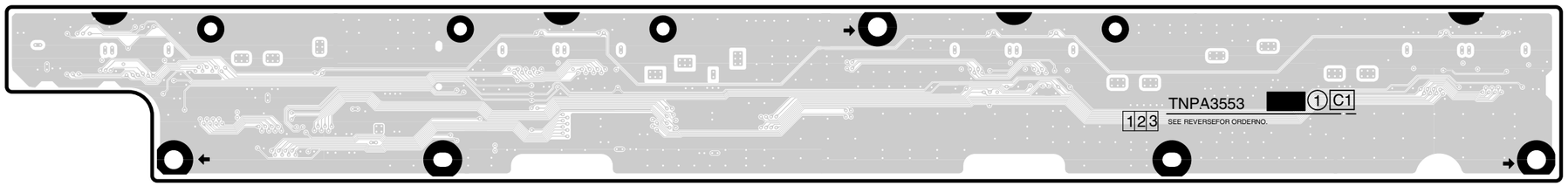
9.3. C1-Board

Parts Location

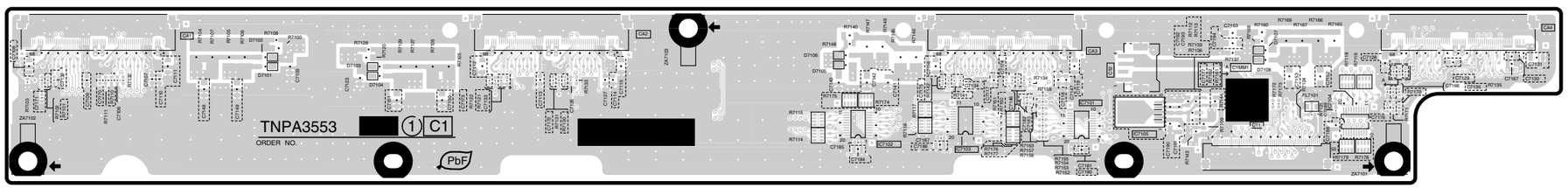
C1-BOARD	
IC	
IC7101	F-2
IC7102	E-2
IC7103	F-2
IC7104	G-2
IC7105	F-2



C1-BOARD (FOIL SIDE)
TNPA3553AB



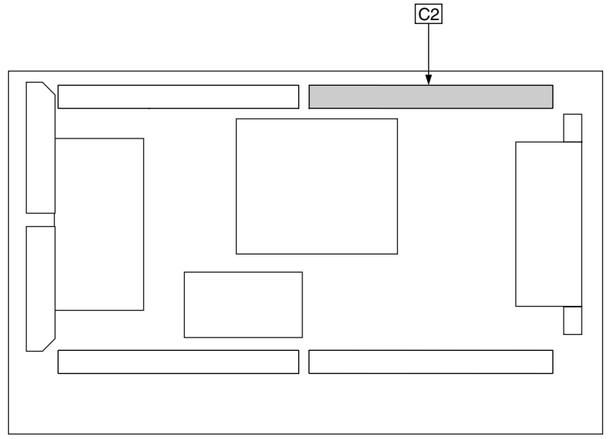
C1-BOARD (COMPONENT SIDE)
TNPA3553AB



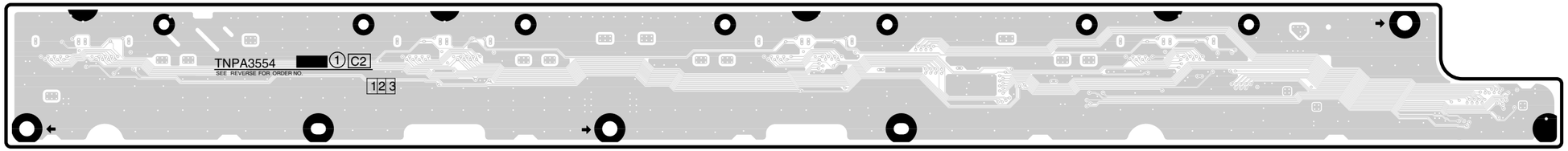
9.4. C2-Board

Parts Location

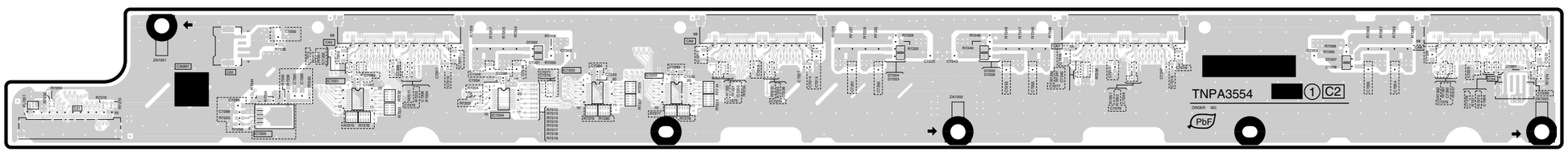
C2-BOARD	
IC	
IC7201	C-2
IC7202	D-2
IC7203	D-2
IC7204	C-2
IC7205	B-1



C2-BOARD (FOIL SIDE)
TNPA3554AB



C2-BOARD (COMPONENT SIDE)
TNPA3554AB

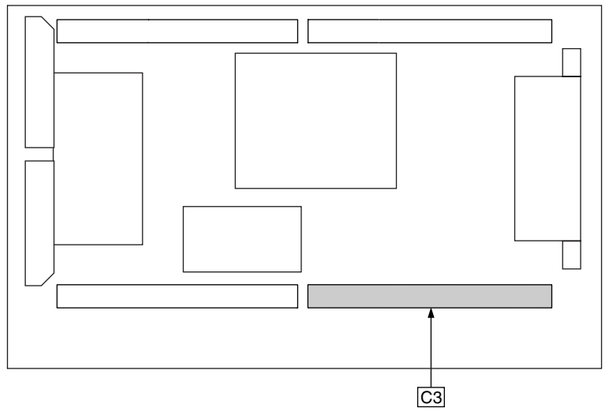


MD-42HM8 SERIES
C2-BOARD TNPA3554AB

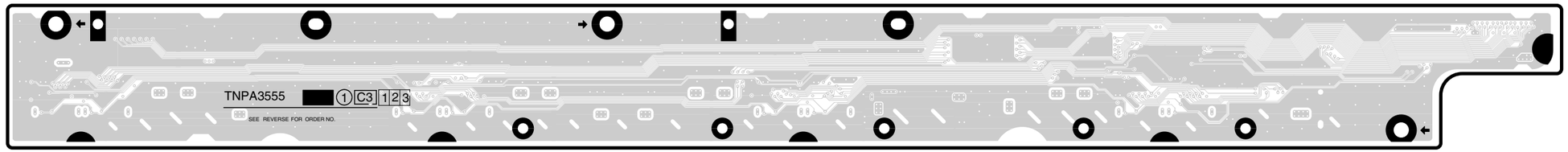
9.5. C3-Board

Parts Location

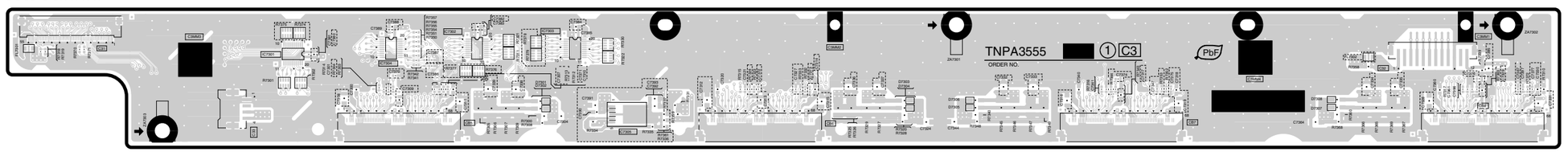
C3-BOARD	
IC	
IC7301	B-2
IC7302	C-2
IC7303	C-2
IC7304	D-2
IC7305	D-1



C3-BOARD (FOIL SIDE)
TNPA3555



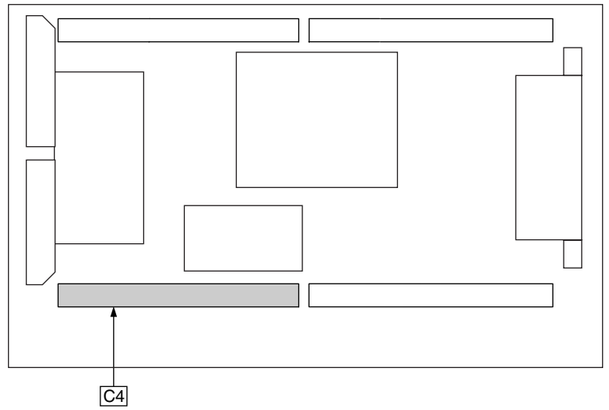
C3-BOARD (COMPONENT SIDE)
TNPA3555



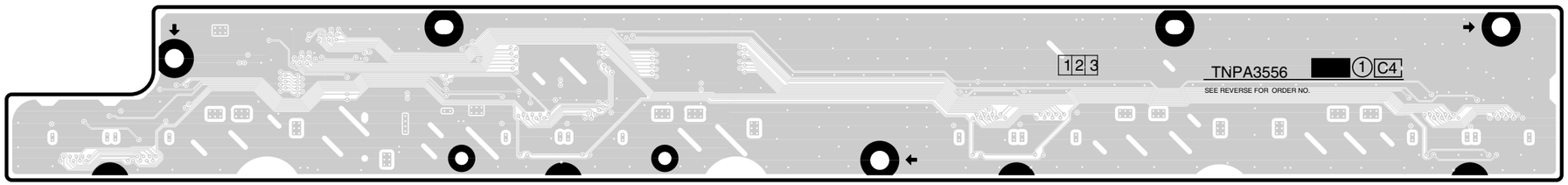
9.6. C4-Board

Parts Location

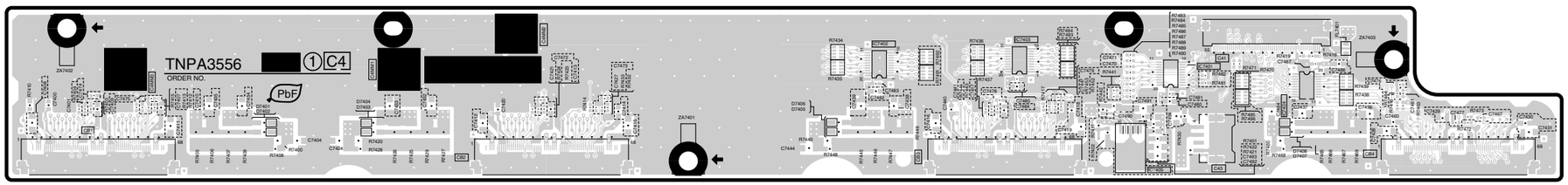
C4-BOARD	
IC	
IC7401	G-2
IC7402	E-2
IC7403	F-2
IC7404	G-2
IC7405	F-1



C4-BOARD (FOIL SIDE)
TNPA3556

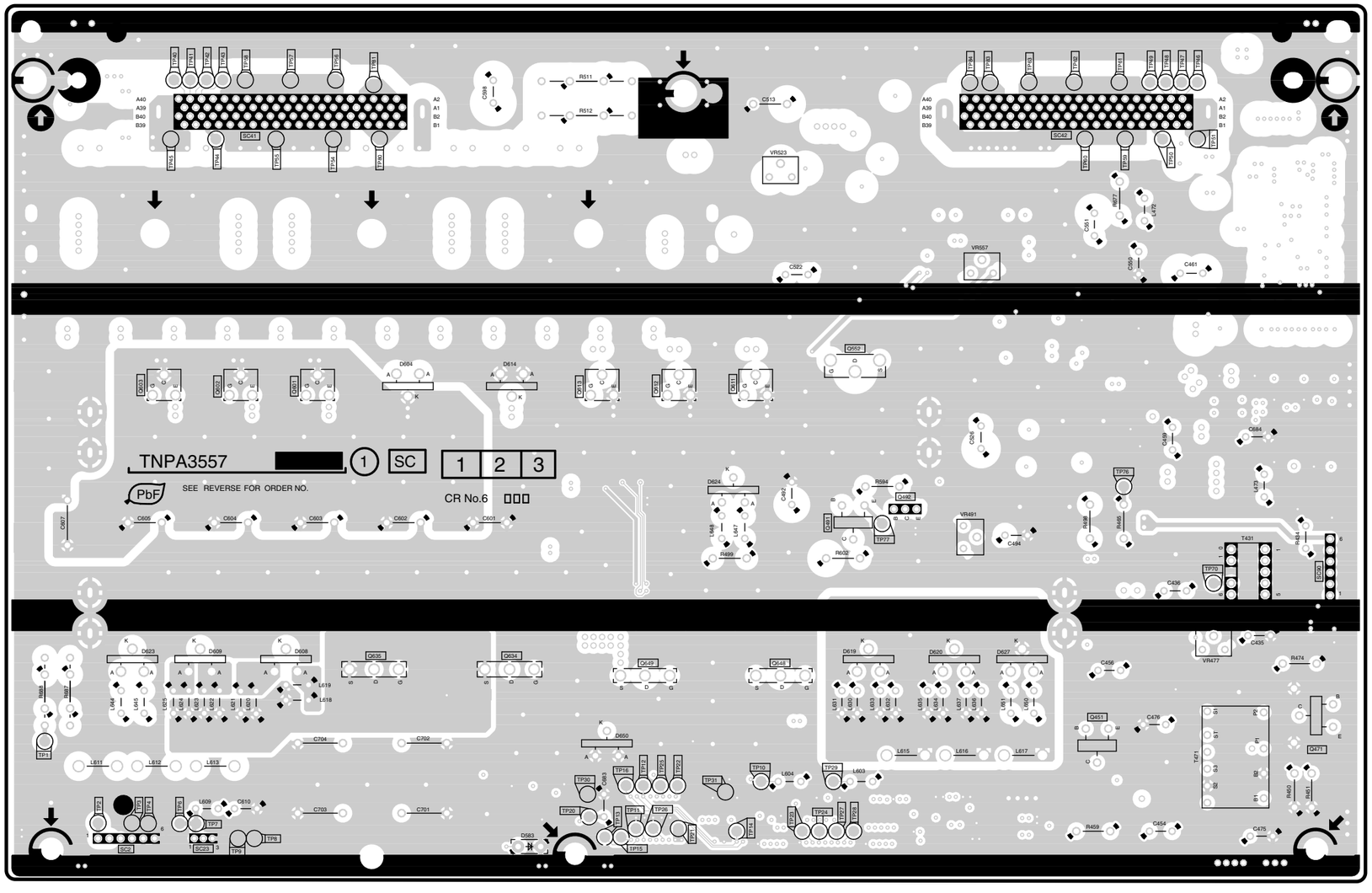


C4-BOARD (COMPONENT SIDE)
TNPA3556



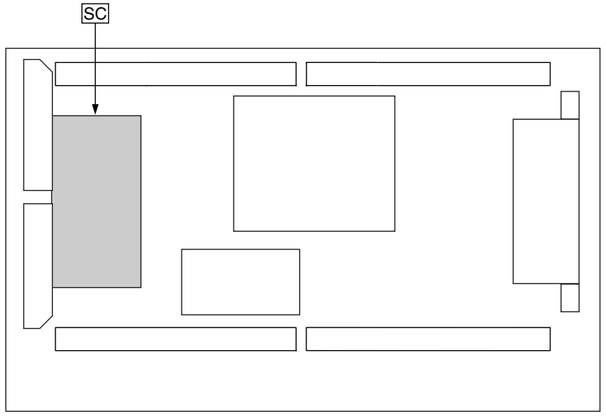
9.7. SC-Board

SC-BOARD (FOIL SIDE)
TNPA3557



MD-42HM8 SERIES
SC-BOARD TNPA3557

MD-42HM8 SERIES
SC-BOARD TNPA3557



Parts Location

SC-BOARD (FOIL SIDE)

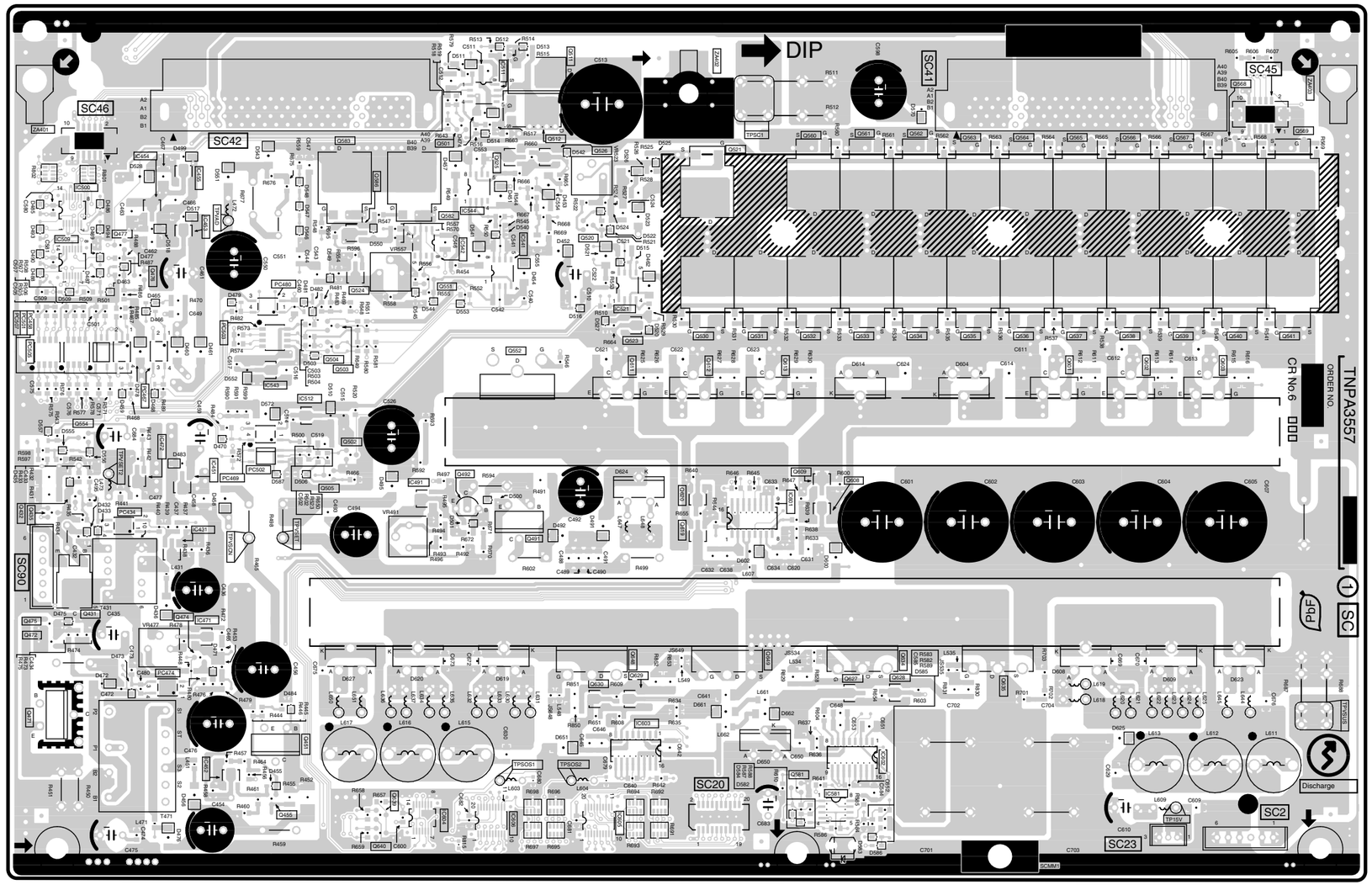
TRANSISTOR		TP			
Q6451	F-2	TP1	A-2	TP41	B-5
Q6471	G-2	TP2	A-1	TP42	B-5
Q6491	E-3	TP3	B-1	TP43	B-5
Q6492	E-3	TP4	B-1	TP44	B-5
Q6552	E-4	TP6	B-1	TP45	B-5
Q6601	C-4	TP7	B-1	TP46	G-5
Q6602	B-4	TP8	B-1	TP47	G-5
Q6603	B-4	TP9	B-1	TP48	G-5
Q6611	E-4	TP10	E-2	TP49	G-5
Q6612	D-4	TP11	D-1	TP50	G-5
Q6613	D-4	TP12	D-2	TP51	G-5
Q6634	D-2	TP13	D-1	TP54	C-5
Q6635	C-2	TP14	E-1	TP55	B-5
Q6648	E-2	TP15	D-1	TP56	C-5
Q6649	D-2	TP16	D-2	TP57	B-5
		TP20	D-1	TP58	B-5
		TP21	D-1	TP59	G-5
		TP22	D-2	TP60	F-5
		TP23	E-1	TP61	G-5
		TP24	E-1	TP62	F-5
		TP25	D-2	TP63	F-5
		TP26	D-1	TP70	G-3
		TP27	E-1	TP76	G-3
		TP28	E-1	TP77	E-3
		TP29	E-2	TP80	C-5
		TP30	D-2	TP81	C-5
		TP31	E-2	TP83	F-5
				TP84	F-5

Parts Location

SC-BOARD (COMPONENT SIDE)

IC		TRANSISTOR		Q6533	E-4	Q6603	G-4
IC6431	B-3	Q6431	A-3	Q6534	F-4	Q6608	E-3
IC6451	B-3	Q6432	A-3	Q6535	F-4	Q6609	E-3
IC6453	B-4	Q6435	A-3	Q6536	F-4	Q6611	D-4
IC6454	B-4	Q6451	B-2	Q6537	F-4	Q6612	D-4
IC6455	B-5	Q6455	B-2	Q6538	G-4	Q6613	E-4
IC6462	B-2	Q6471	A-2	Q6539	G-4	Q6619	D-3
IC6471	B-2	Q6472	A-2	Q6540	G-4	Q6620	D-3
IC6472	B-3	Q6474	B-2	Q6541	G-4	Q6627	E-2
IC6491	C-3	Q6475	A-2	Q6551	C-4	Q6628	E-2
IC6500	A-5	Q6476	B-4	Q6552	C-4	Q6629	D-2
IC6509	A-4	Q6477	A-4	Q6554	A-3	Q6630	D-2
IC6511	C-5	Q6491	D-3	Q6560	E-5	Q6634	E-2
IC6512	B-3	Q6492	C-3	Q6561	E-5	Q6635	F-2
IC6521	D-4	Q6502	C-3	Q6562	F-5	Q6639	C-1
IC6541	C-4	Q6503	C-4	Q6563	F-5	Q6640	C-1
IC6542	C-4	Q6504	C-4	Q6564	F-5	Q6648	D-2
IC6543	B-4	Q6506	C-3	Q6565	F-5	Q6649	E-2
IC6544	C-5	Q6511	D-5	Q6566	G-5		
IC6581	E-1	Q6512	D-5	Q6567	G-5	**TP**	
IC6601	E-3	Q6520	D-4	Q6568	G-5	TP15V	G-1
IC6602	E-2	Q6521	D-5	Q6569	G-5	TPSC1	E-5
IC6603	D-2	Q6523	D-4	Q6581	E-2	TPSOS1	C-2
IC6604	C-1	Q6524	C-4	Q6582	C-5	TPSOS2	D-2
IC6605	D-1	Q6525	C-5	Q6583	C-5	TPVAD	B-4
IC6606	C-1	Q6526	D-5	Q6588	C-4	TPVSCN	B-3
		Q6530	D-4	Q6601	C-5	TPVSET	B-3
		Q6531	E-4	Q6601	F-4	TPVSET2	A-3
		Q6532	E-4	Q6602	G-4	TPVSUS	H-2

SC-BOARD (COMPONENT SIDE)
TNPA3557



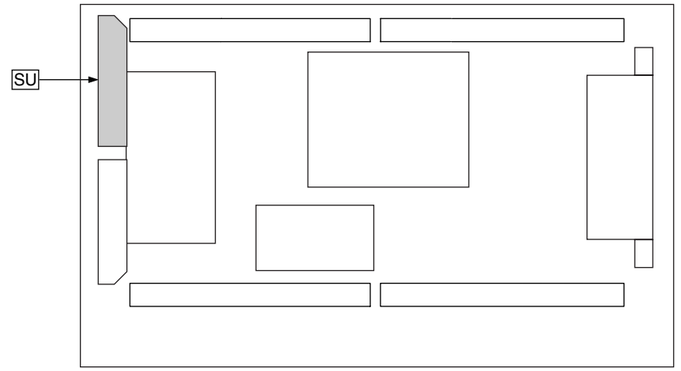
MD-42HM8 SERIES
SC-BOARD TNPA3557

MD-42HM8 SERIES
SC-BOARD TNPA3557

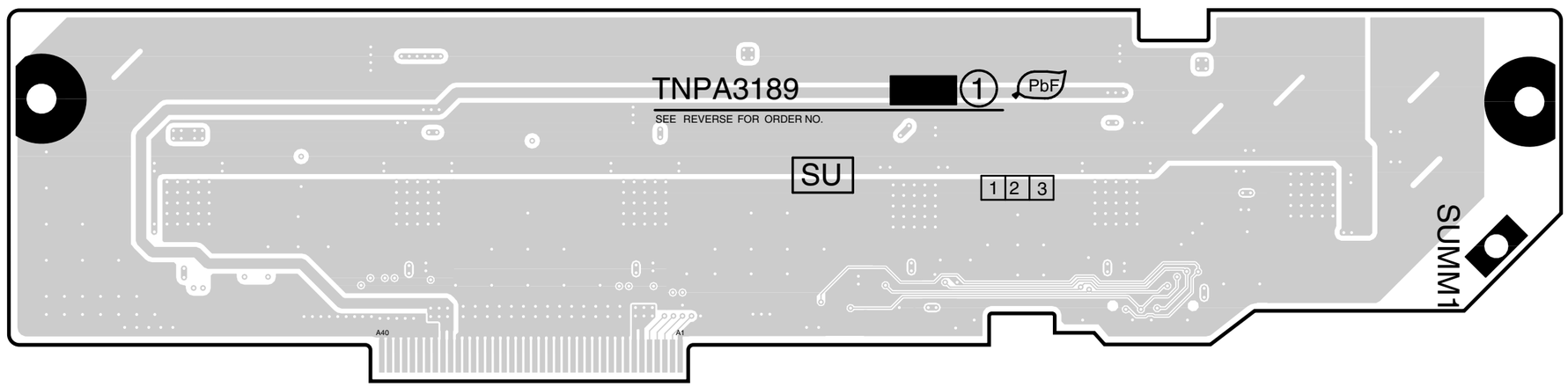
9.8. SU-Board

Parts Location

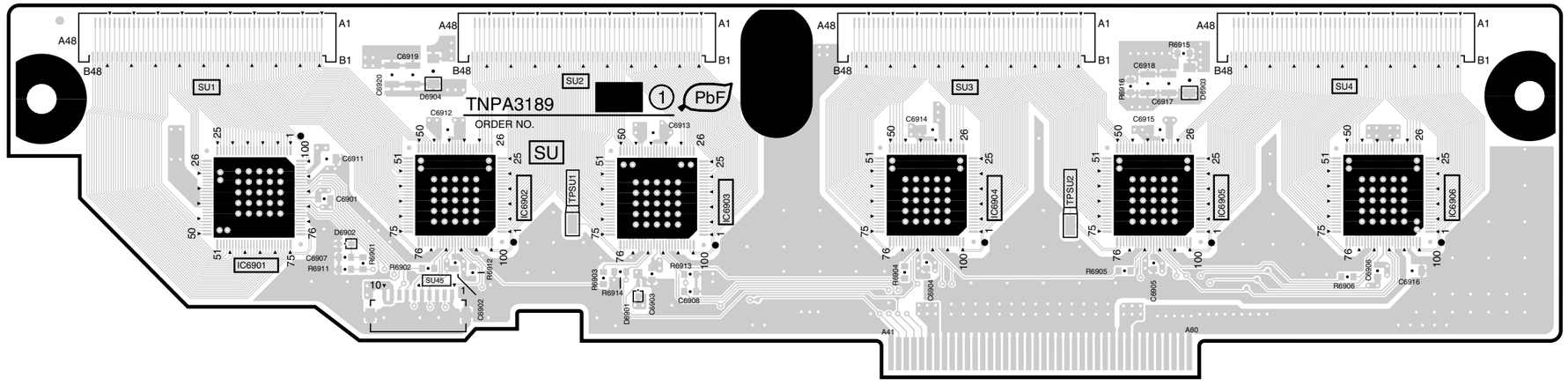
SU-BOARD			
IC		**TP**	
IC6901	B-1	TPSU1	D-2
IC6902	C-2	TPSU2	F-2
IC6903	D-2		
IC6904	F-2		
IC6905	G-2		
IC6906	H-2		



SU-BOARD(FOIL SIDE)
TNPA3189AB



SU-BOARD(COMPONENT SIDE)
TNPA3189AB



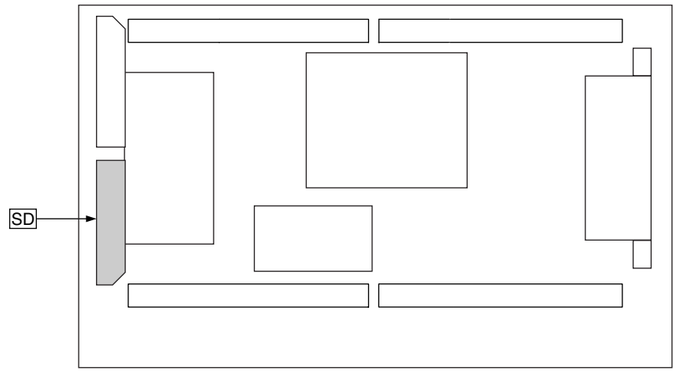
MD-42HM8 SERIES
SU-BOARD TNPA3189AB

MD-42HM8 SERIES
SU-BOARD TNPA3189AB

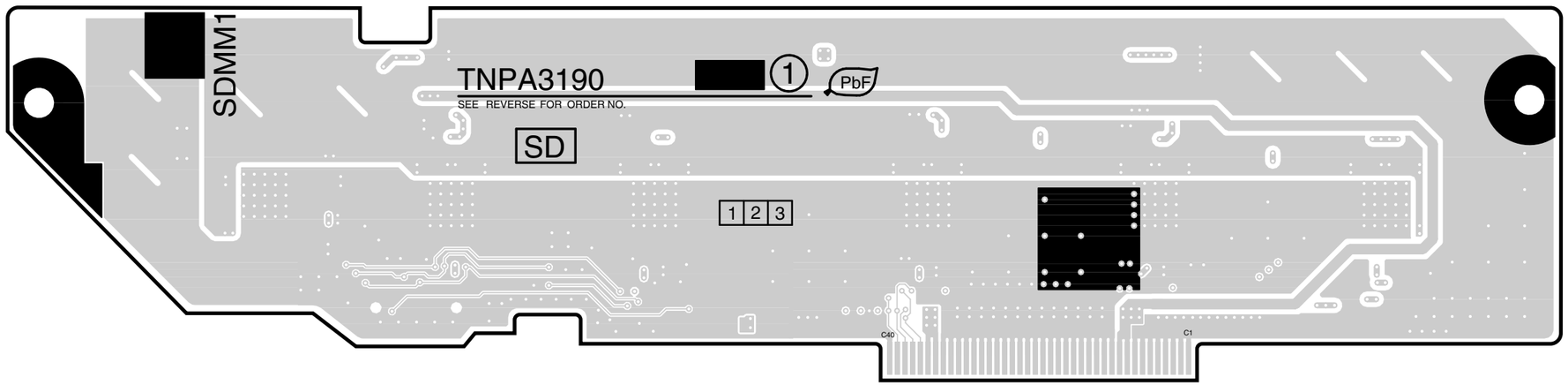
9.9. SD-Board

Parts Location

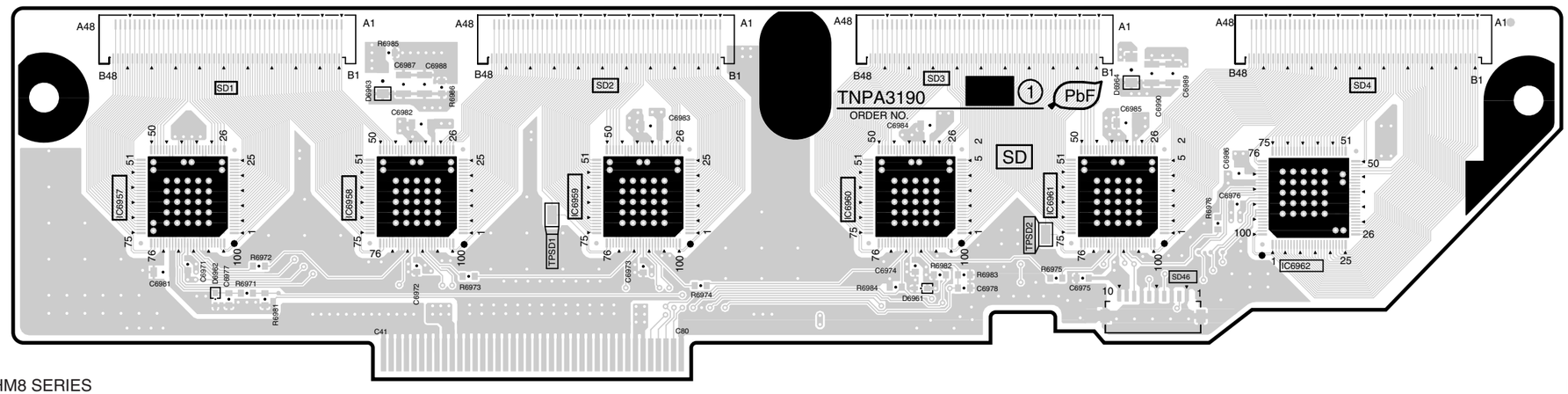
SD-BOARD			
IC		**TP**	
IC6957	A-2	TPSD1	D-1
IC6958	C-2	TPSD2	F-1
IC6959	D-2		
IC6960	E-2		
IC6961	F-2		
IC6962	G-1		



SD-BOARD(FOIL SIDE)
TNPA3190AB



SD-BOARD(COMPONENT SIDE)
TNPA3190AB

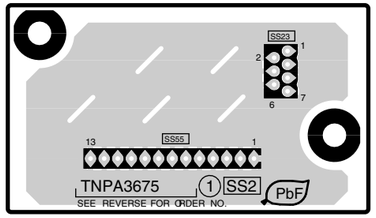


MD-42HM8 SERIES
SD-BOARD TNPA3190AB

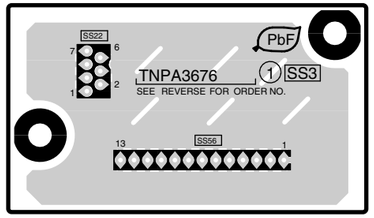
MD-42HM8 SERIES
SD-BOARD TNPA3190AB

9.10. SS-Board

SS2-BOARD (FOIL SIDE)
TNPA3675

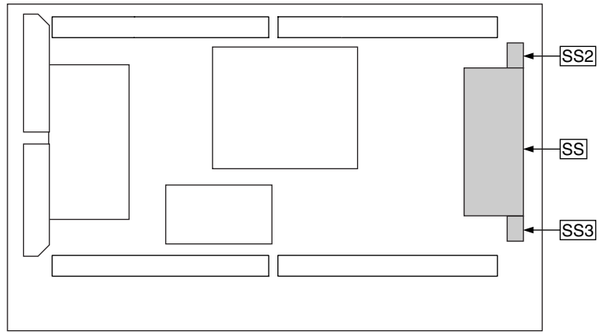


SS3-BOARD (FOIL SIDE)
TNPA3676

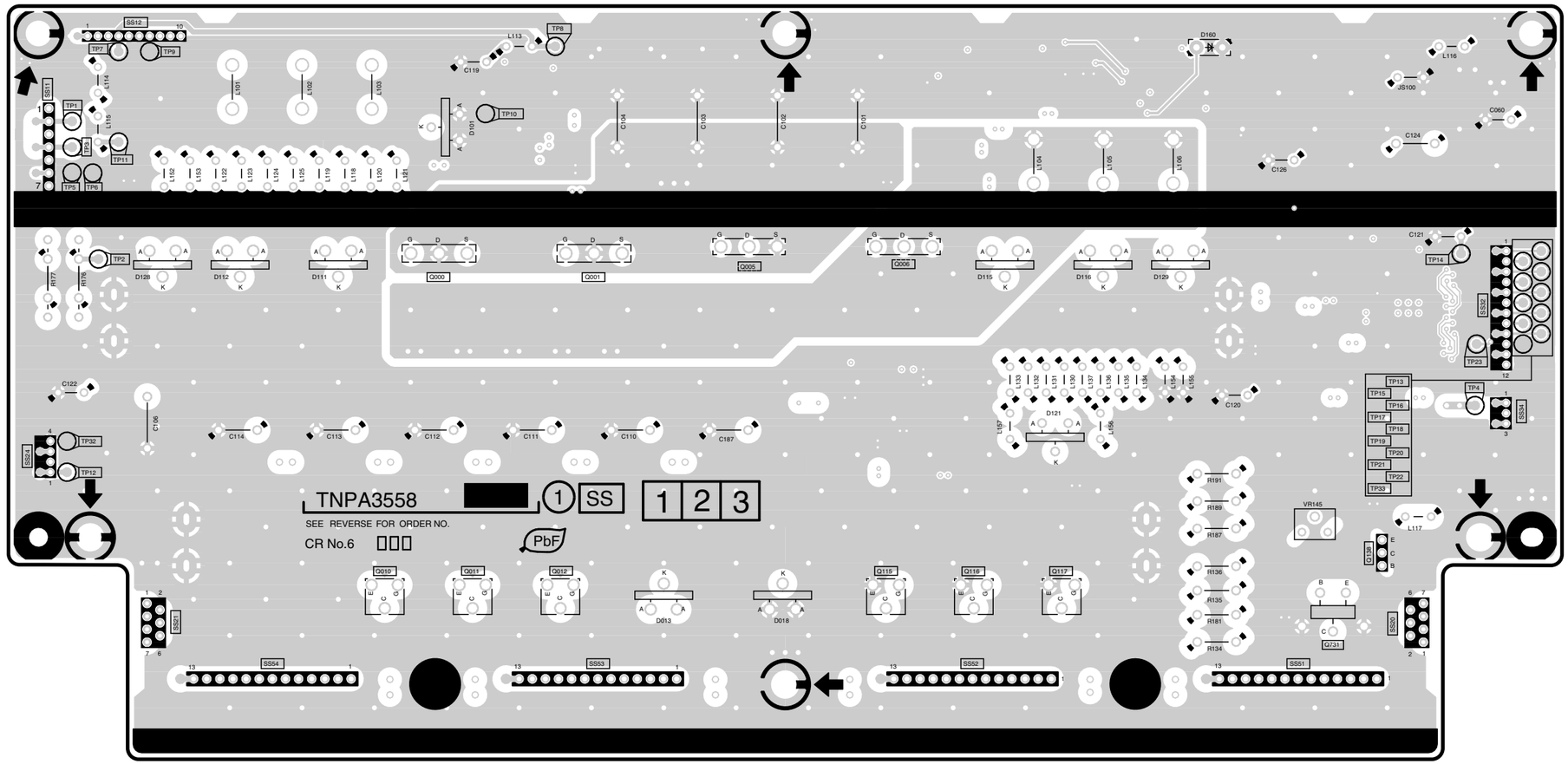


Parts Location

SS-BOARD (FOIL SIDE)			
IC		Q6117	C-2
IC6101	D-3	Q6125	C-4
IC6102	F-4	Q6127	B-3
IC6103	D-4	Q6128	B-3
IC6104	B-4	Q6129	B-4
IC6105	C-4	Q6130	B-4
IC6106	B-3	Q6132	E-3
IC6107	C-4	Q6133	E-3
IC6109	B-2	Q6134	D-3
TRANSISTOR		Q6135	D-3
Q6000	F-4	Q6138	B-2
Q6001	F-4	Q6141	C-4
Q6005	E-4	Q6144	D-4
Q6006	D-4	Q6145	D-4
Q6010	G-2	Q6731	B-2
Q6011	F-2	**TP**	
Q6012	F-2	TP15V	F-5
Q6101	F-4	TPSOS3	B-5
Q6102	F-4	TPVDA	H-4
Q6115	D-2	TPVe	B-2
Q6116	D-2	TPVSUS	H-4



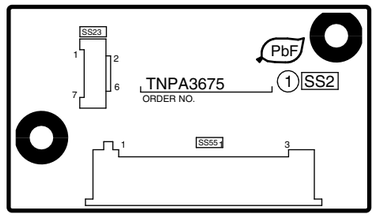
SS-BOARD (FOIL SIDE)
TNPA3558



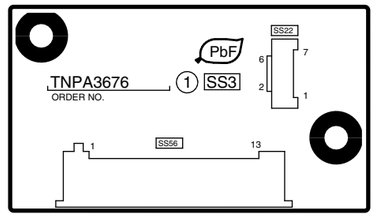
MD-42HM8 SERIES
SS-BOARD TNPA3558
SS2-BOARD TNPA3675
SS3-BOARD TNPA3676

MD-42HM8 SERIES
SS-BOARD TNPA3558
SS2-BOARD TNPA3675
SS3-BOARD TNPA3676

SS2-BOARD (COMPONENT SIDE)
TNPA3675

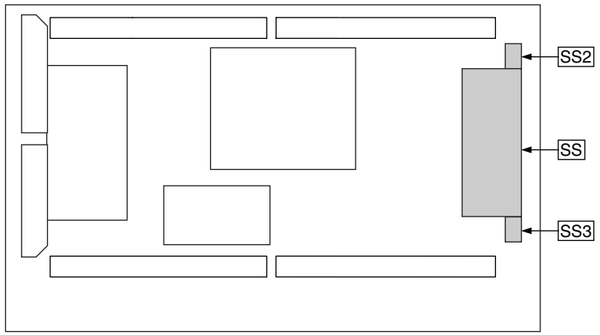


SS3-BOARD (COMPONENT SIDE)
TNPA3676

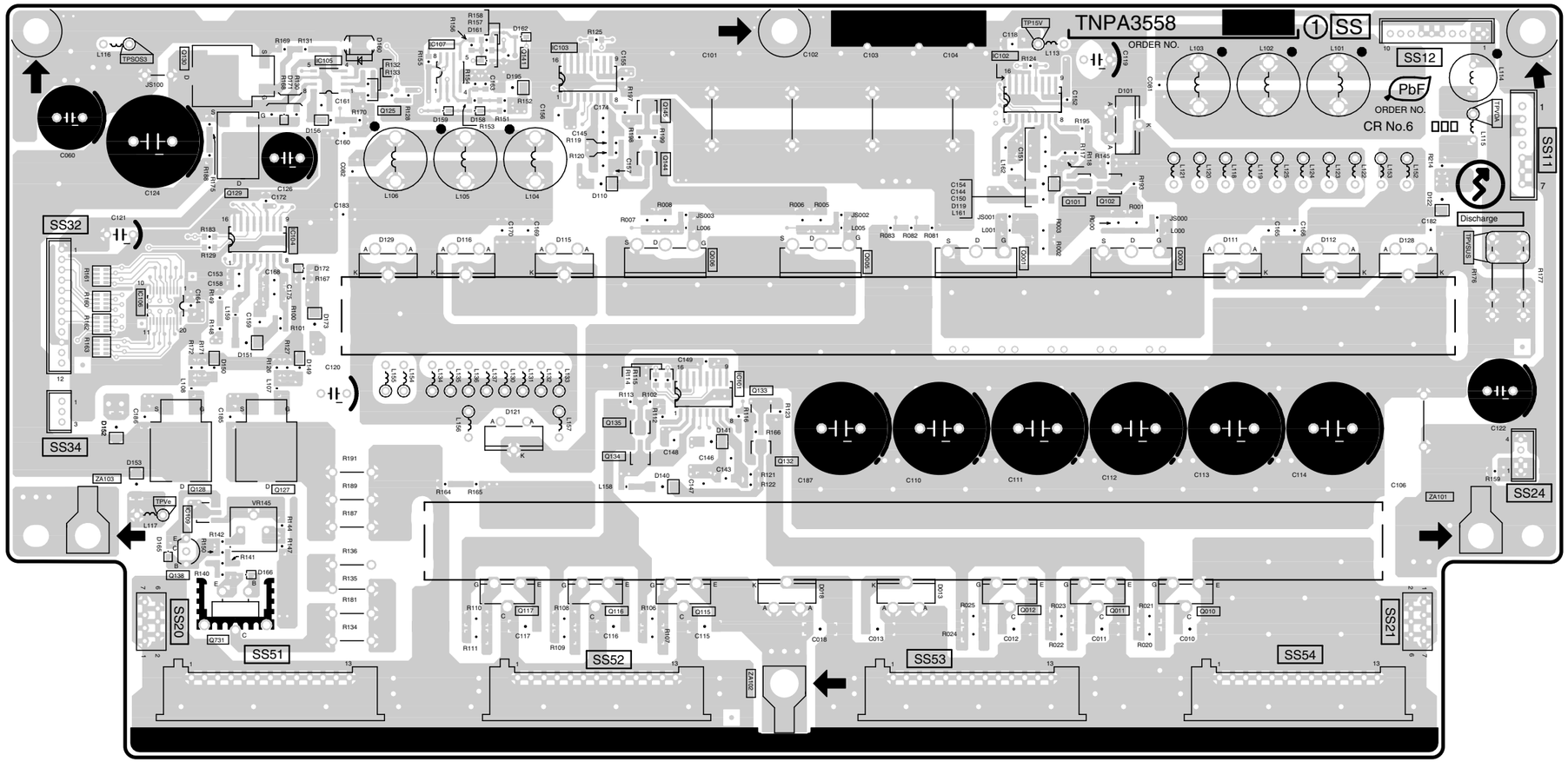


Parts Location

SS-BOARD (COMPONENT SIDE)			
TRANSISTOR		TP6	A-4
Q6000	C-4	TP7	B-5
Q6001	D-4	TP8	D-5
Q6005	E-4	TP9	B-5
Q6006	E-4	TP10	C-4
Q6010	C-2	TP11	B-4
Q6011	C-2	TP12	A-2
Q6012	D-2	TP13	H-4
Q6115	E-2	TP14	H-4
Q6116	F-2	TP15	H-4
Q6117	F-2	TP16	H-4
Q6138	H-2	TP17	H-3
Q6731	G-2	TP18	H-3
TP		TP19	H-3
TP1	A-4	TP20	H-3
TP2	A-4	TP21	H-3
TP3	A-4	TP22	H-3
TP4	H-3	TP23	H-3
TP5	A-4	TP32	A-3
		TP33	H-3



SS-BOARD (COMPONENT SIDE)
TNPA3558



MD-42HM8 SERIES
SS-BOARD TNPA3558
SS2-BOARD TNPA3675
SS3-BOARD TNPA3676

MD-42HM8 SERIES
SS-BOARD TNPA3558
SS2-BOARD TNPA3675
SS3-BOARD TNPA3676

10 Block and Schematic Diagram

10.1. Schematic Diagram Notes

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

Notes:

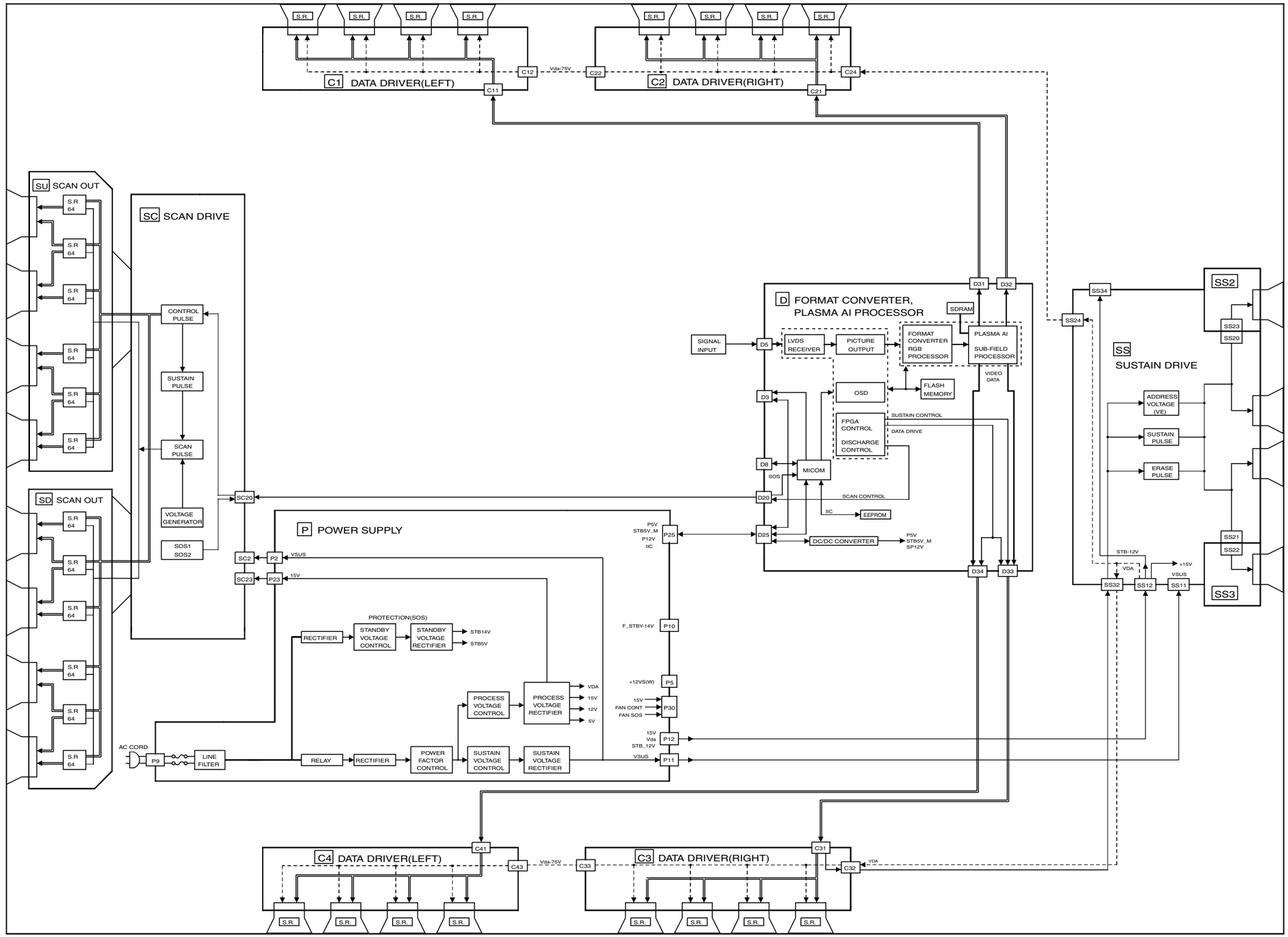
1. **Resistor**
   Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
2. **Capacitor**
   Unit of capacitance is μF, unless otherwise noted.
3. Coil
   Unit of inductance is H, unless otherwise noted.
4. Test Point
   ⚲ : Test Point position
5. Earth Symbol
   ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)
6. Voltage Measurement
   Voltage is measured by a DC voltmeter.
   Conditions of the measurement are the following:
   Power Source AC100-240V, 50/60Hz
   Receiving Signal ..... Colour Bar signal
   All customer's controls ..... Maximum positions
7. When arrow mark (↗) is found, connection is easily found from the direction of arrow.
8. Indicates the major signal flow. : Video ➡ Audio ⇨
9. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
   The circuit is defined by HOT and COLD indications in the schematic diagram. Take the follwing precautions.
   All circuits, except the Power Circuit, are cold.
   Precautions
   a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
   b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
   c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
      Connect the earth of instruments to the earth connection of the circuit being measured.
   d. Make sure to disconnect the power plug before removing the chassis.

MD-42HM8 SERIES
Schematic Diagram Notes

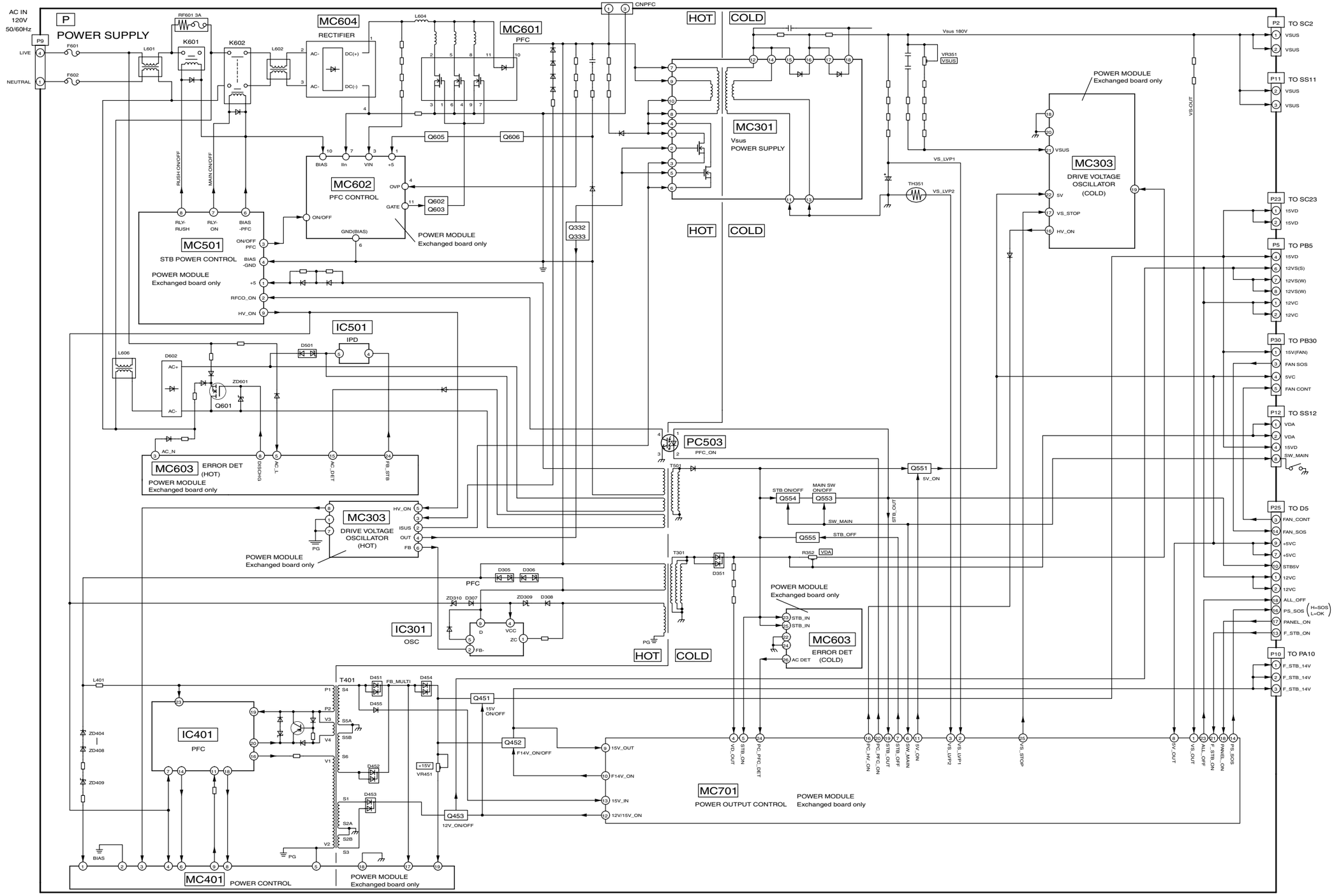
10.2. Main Block Diagram



MD-42HM8 SERIES
Main Block Diagram

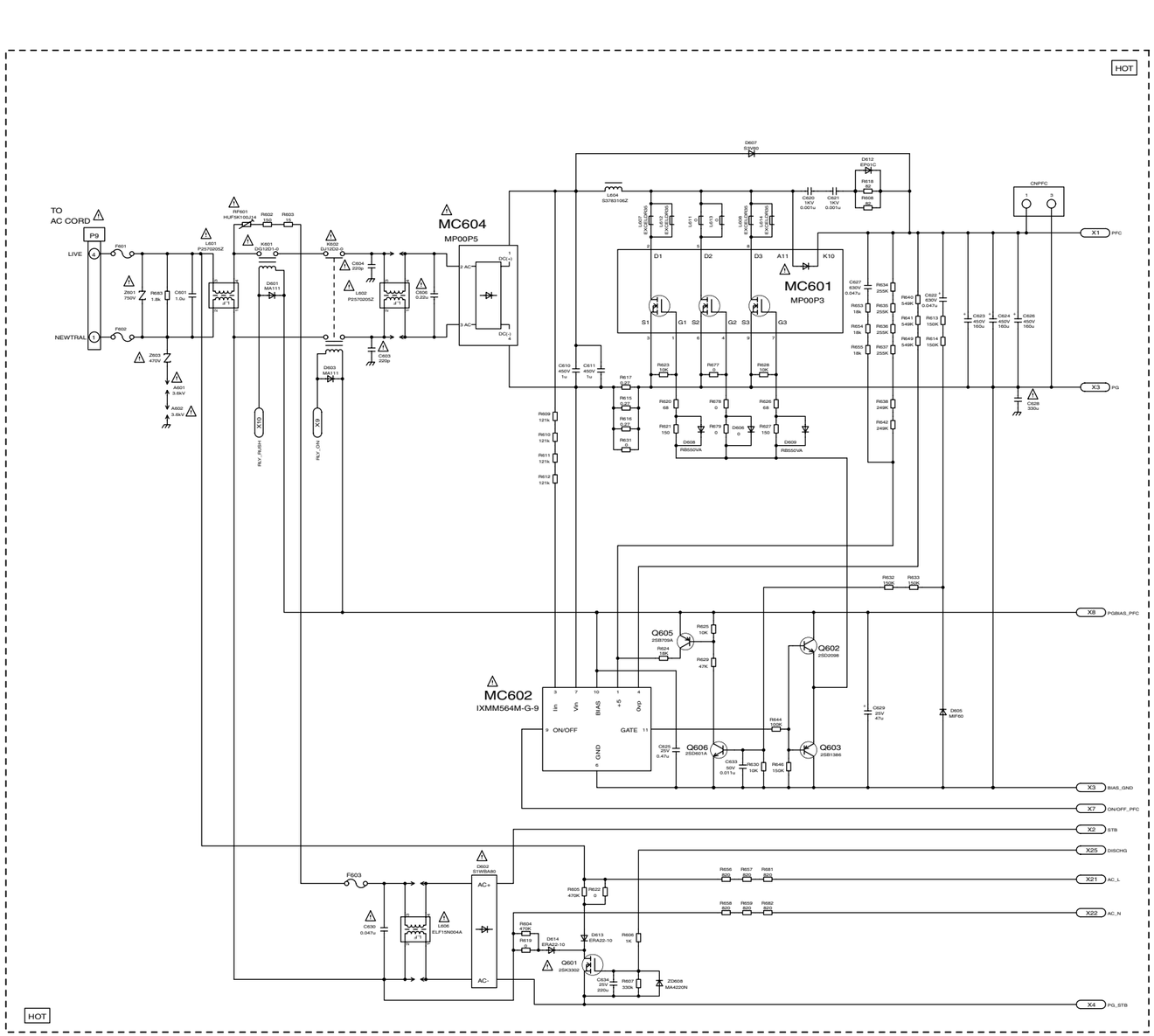
MD-42HM8 SERIES
Main Block Diagram

10.3. P-Board Block Diagram

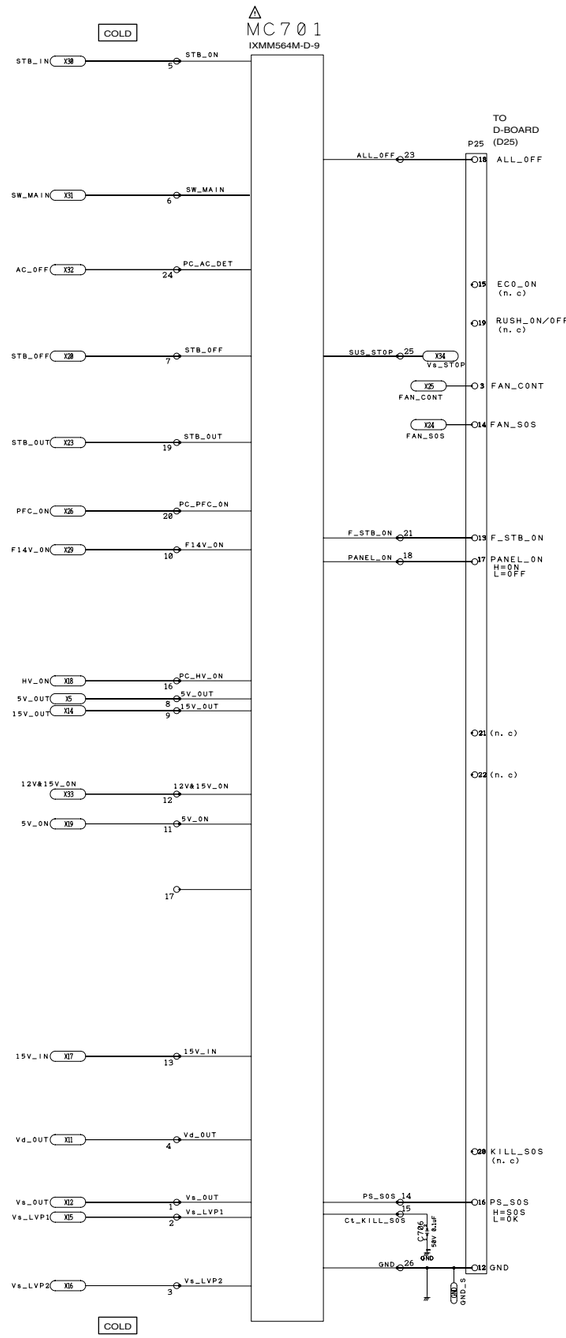


MD-42HM8 SERIES
P-Board Block Diagram

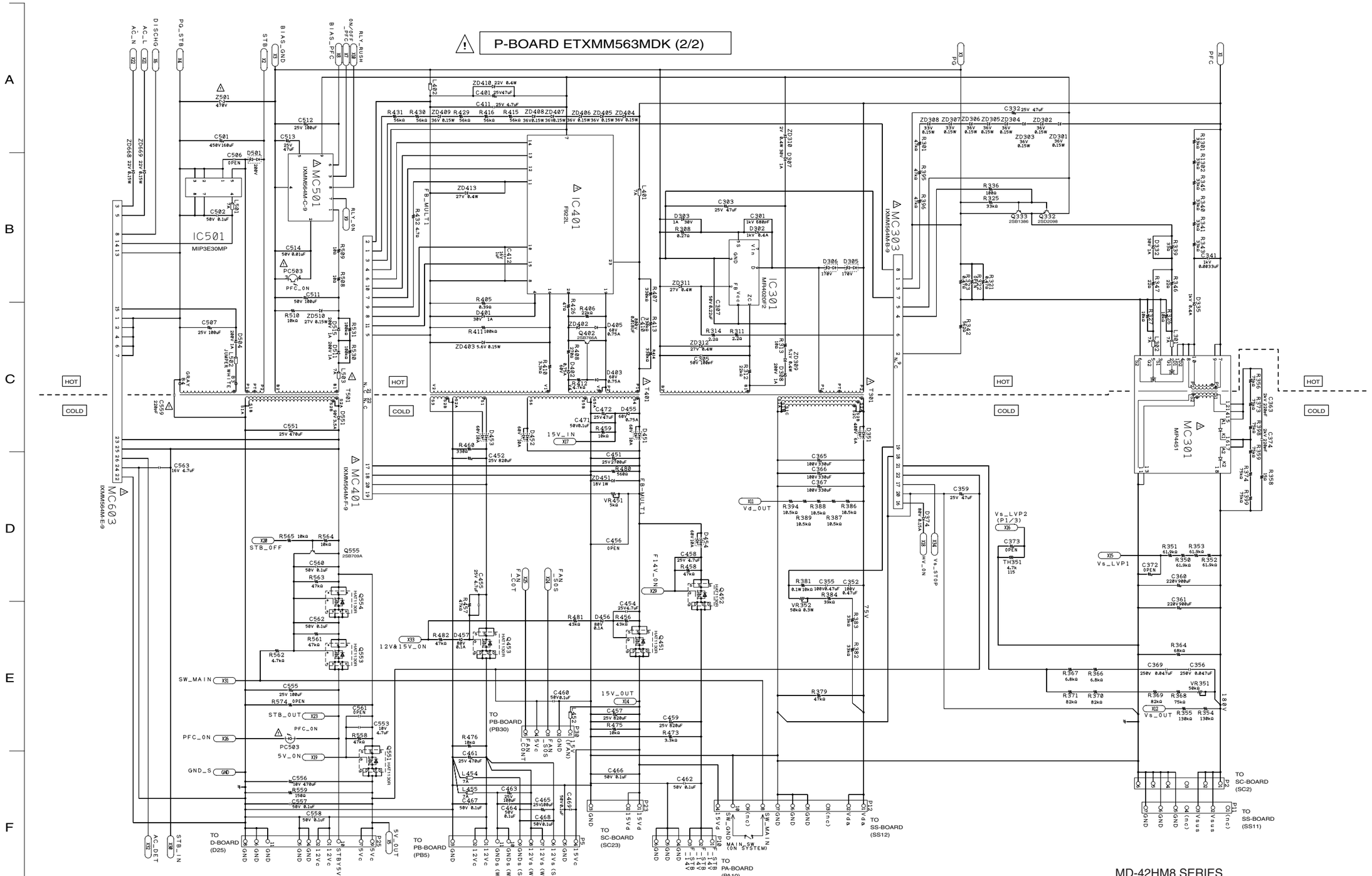
10.4. P-Board (1 of 2) Schematic Diagram



P-BOARD ETXMM563MDK (1/2)



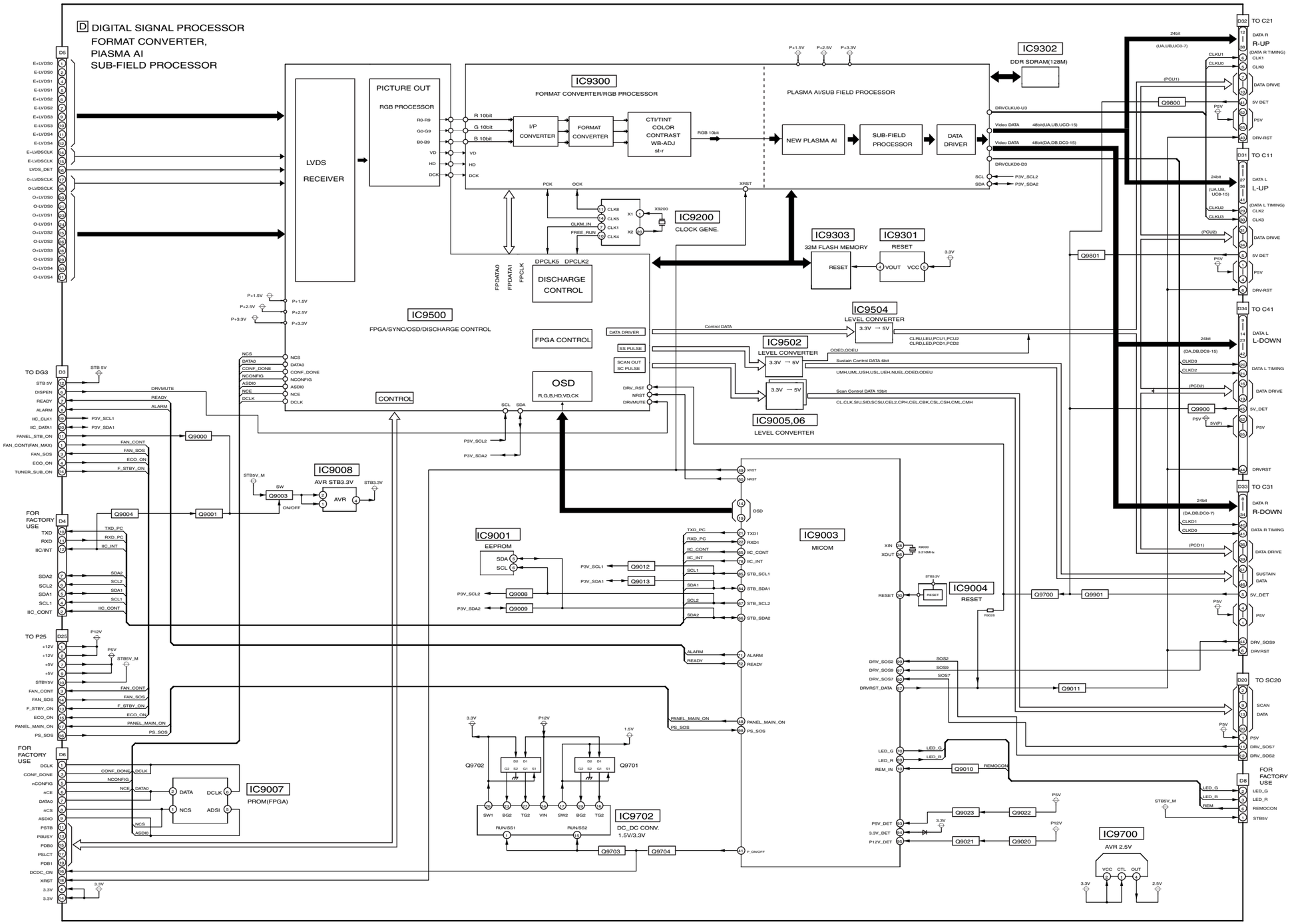
10.5. P-Board (2 of 2) Schematic Diagram



MD-42HM8 SERIES P-Board (2 of 2) Schematic Diagram

MD-42HM8 SERIES
P-Board (2 of 2) Schematic Diagram

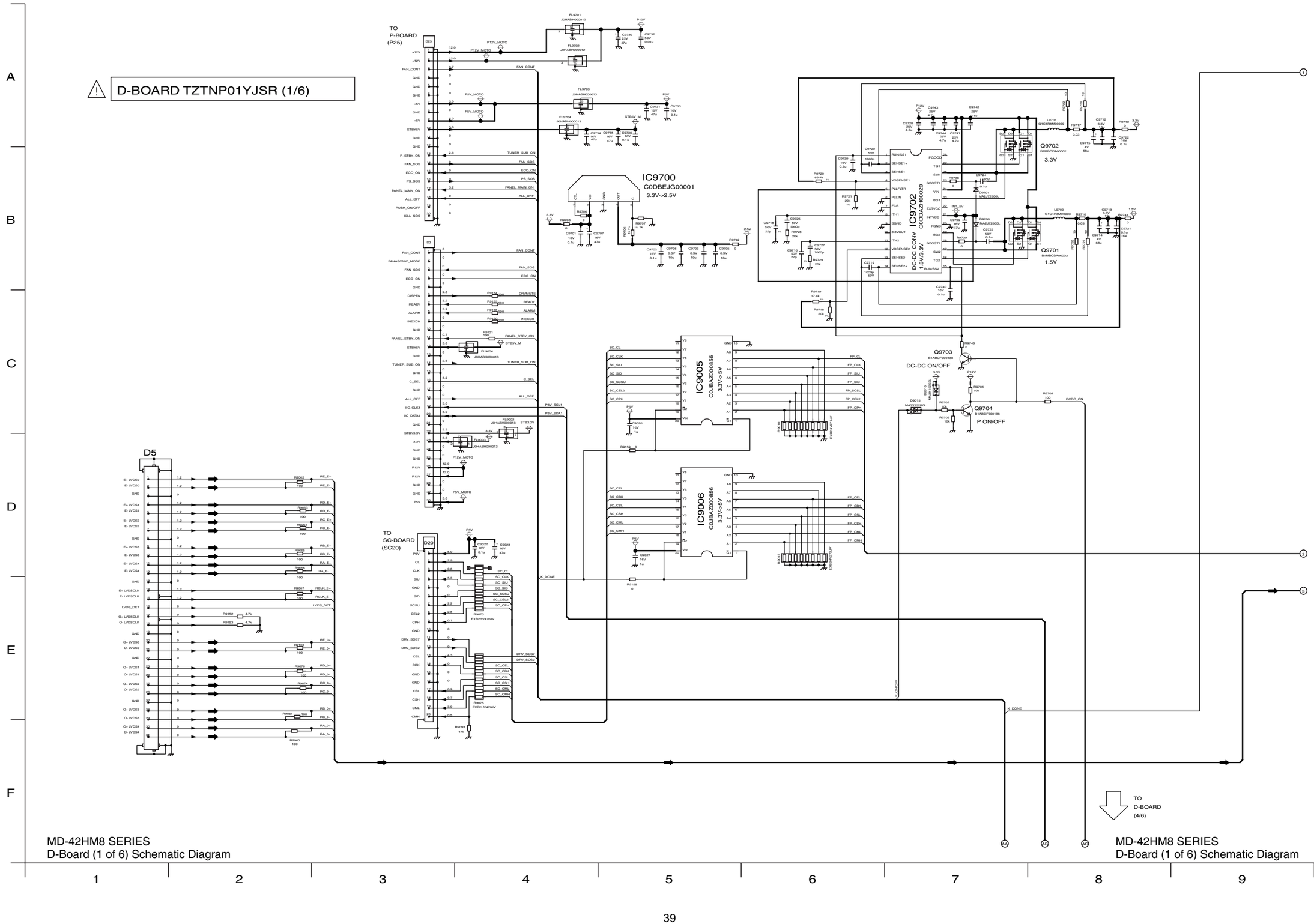
10.6. D-Board Block Diagram



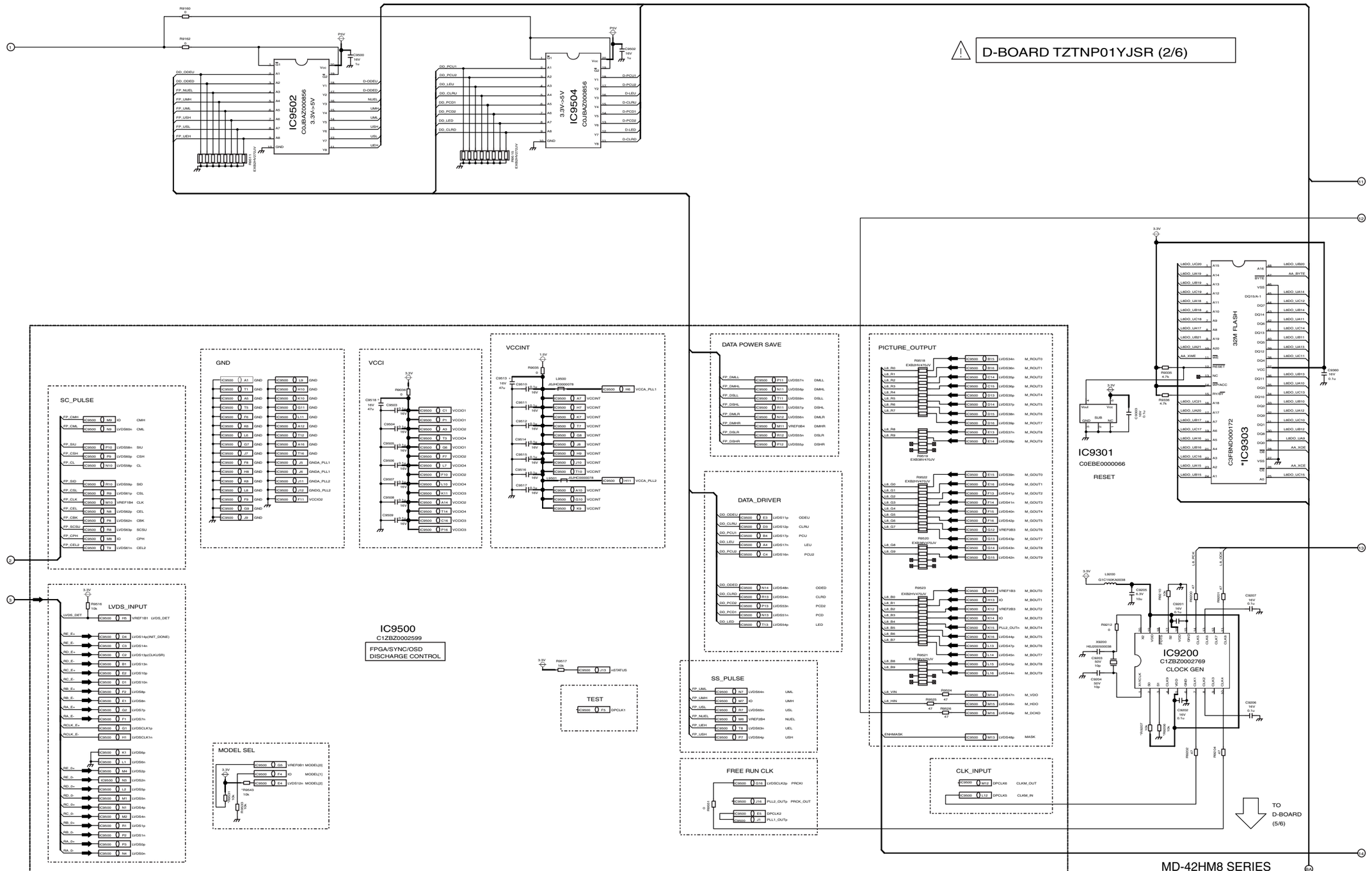
MD-42HM8 SERIES
D-Board Block Diagram

MD-42HM8 SERIES
D-Board Block Diagram

10.7. D-Board (1 of 6) Schematic Diagram



10.8. D-Board (2 of 6) Schematic Diagram

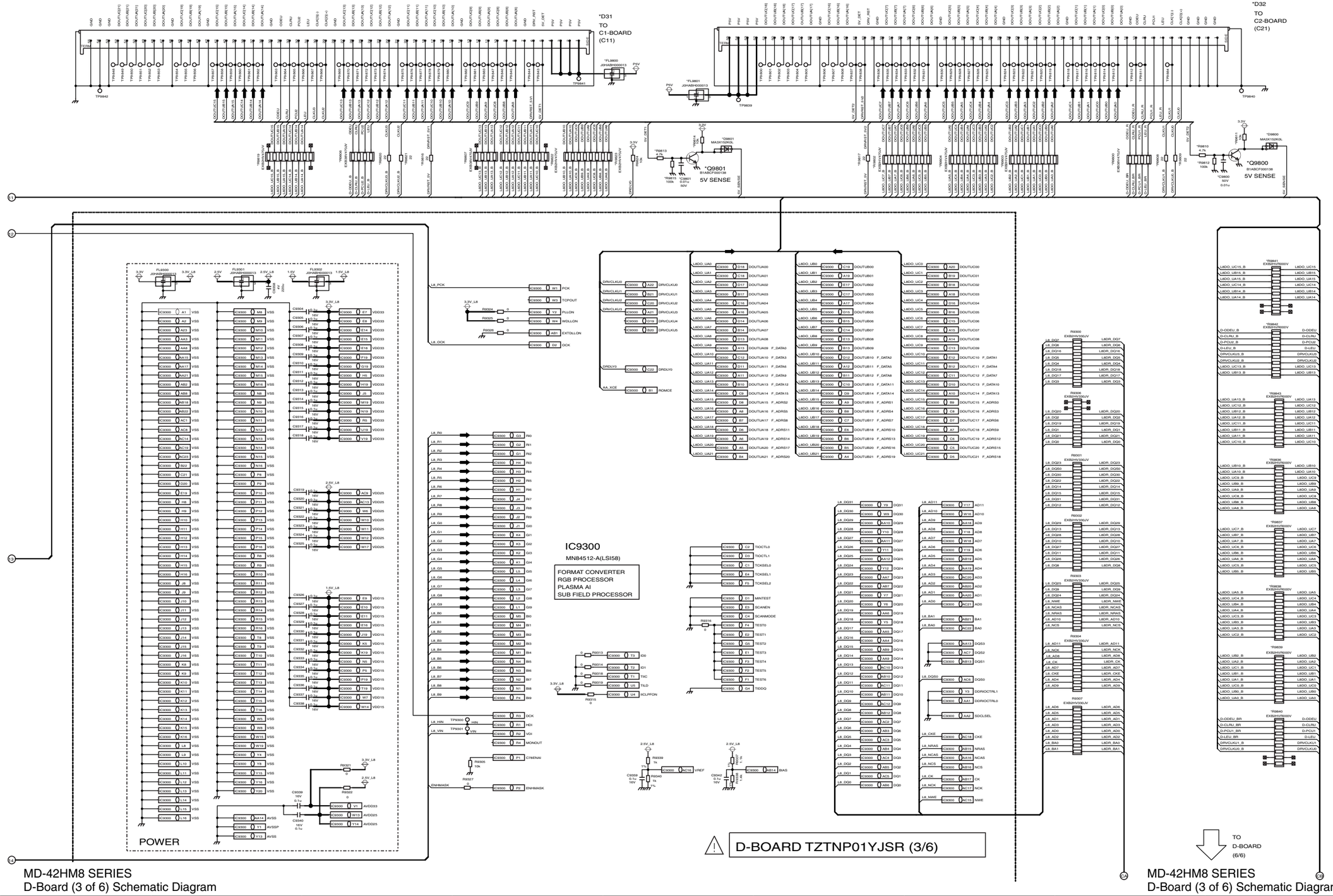


MD-42HM8 SERIES D-Board (2 of 6) Schematic Diagram

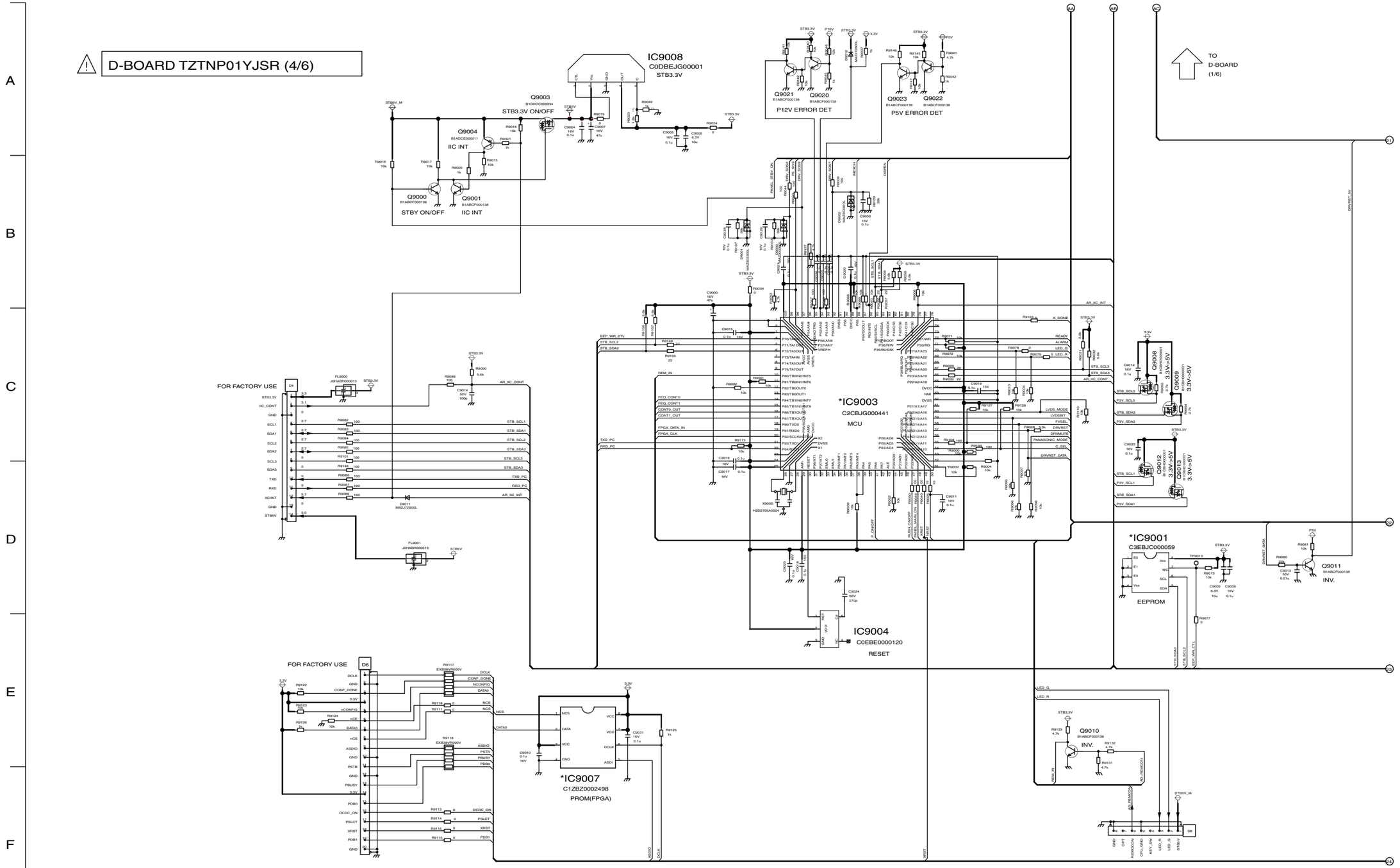
MD-42HM8 SERIES
D-Board (2 of 6) Schematic Diagram

10 11 12 13 14 15 16 17 18

10.9. D-Board (3 of 6) Schematic Diagram

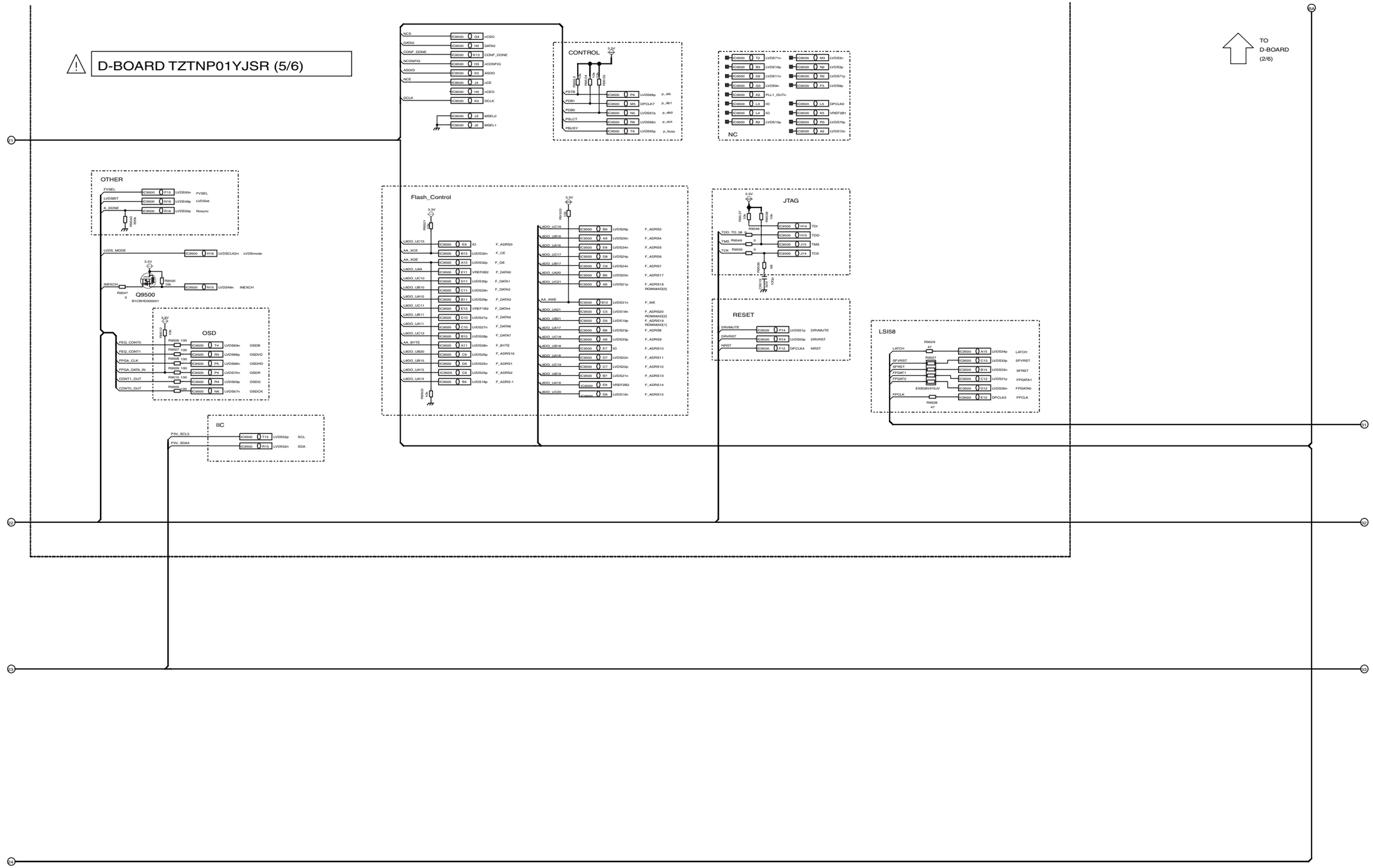


10.10. D-Board (4 of 6) Schematic Diagram



MD-42HM8 SERIES
D-Board (4 of 6) Schematic Diagram

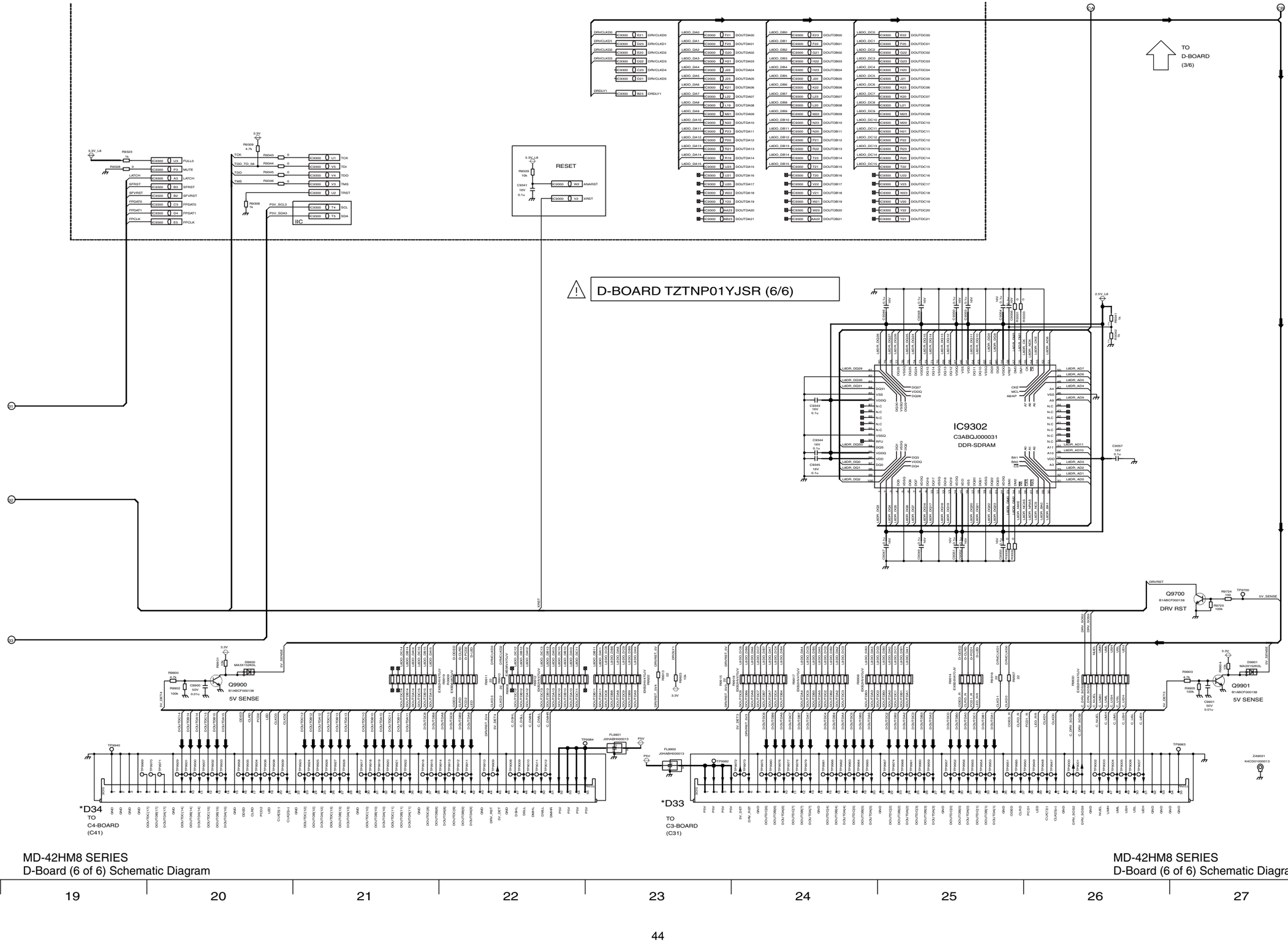
10.11. D-Board (5 of 6) Schematic Diagram



MD-42HM8 SERIES
D-Board (5 of 6) Schematic Diagram

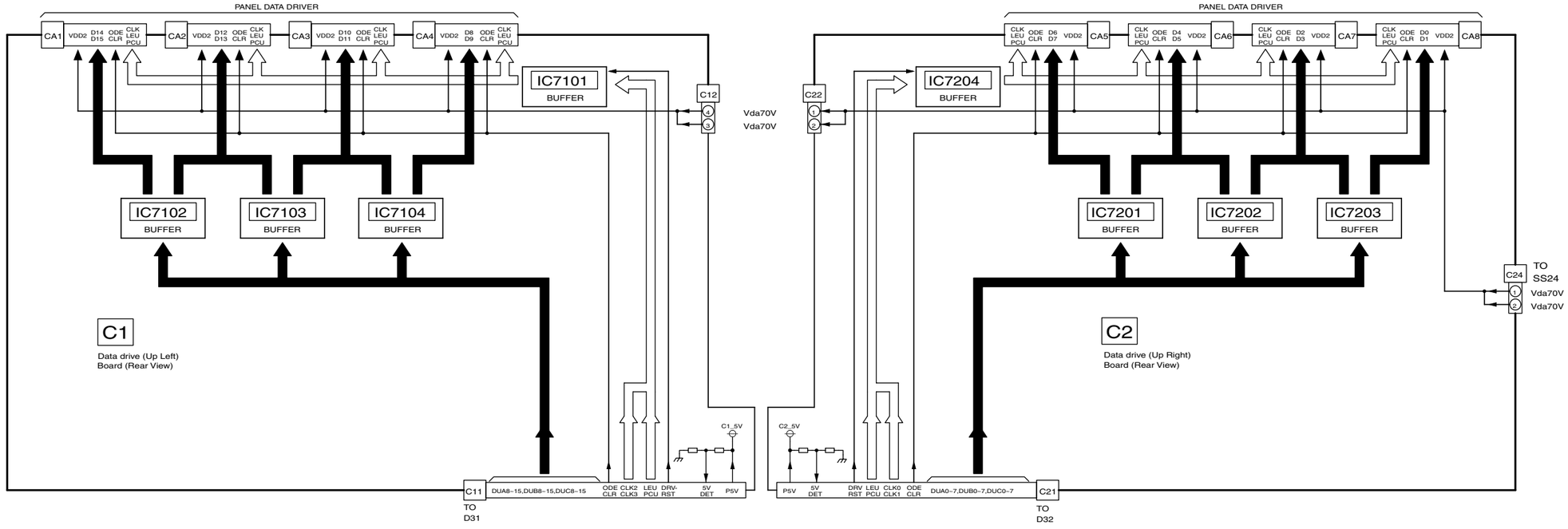
10 11 12 13 14 15 16 17 18

10.12. D-Board (6 of 6) Schematic Diagram



MD-42HM8 SERIES
D-Board (6 of 6) Schematic Diagram

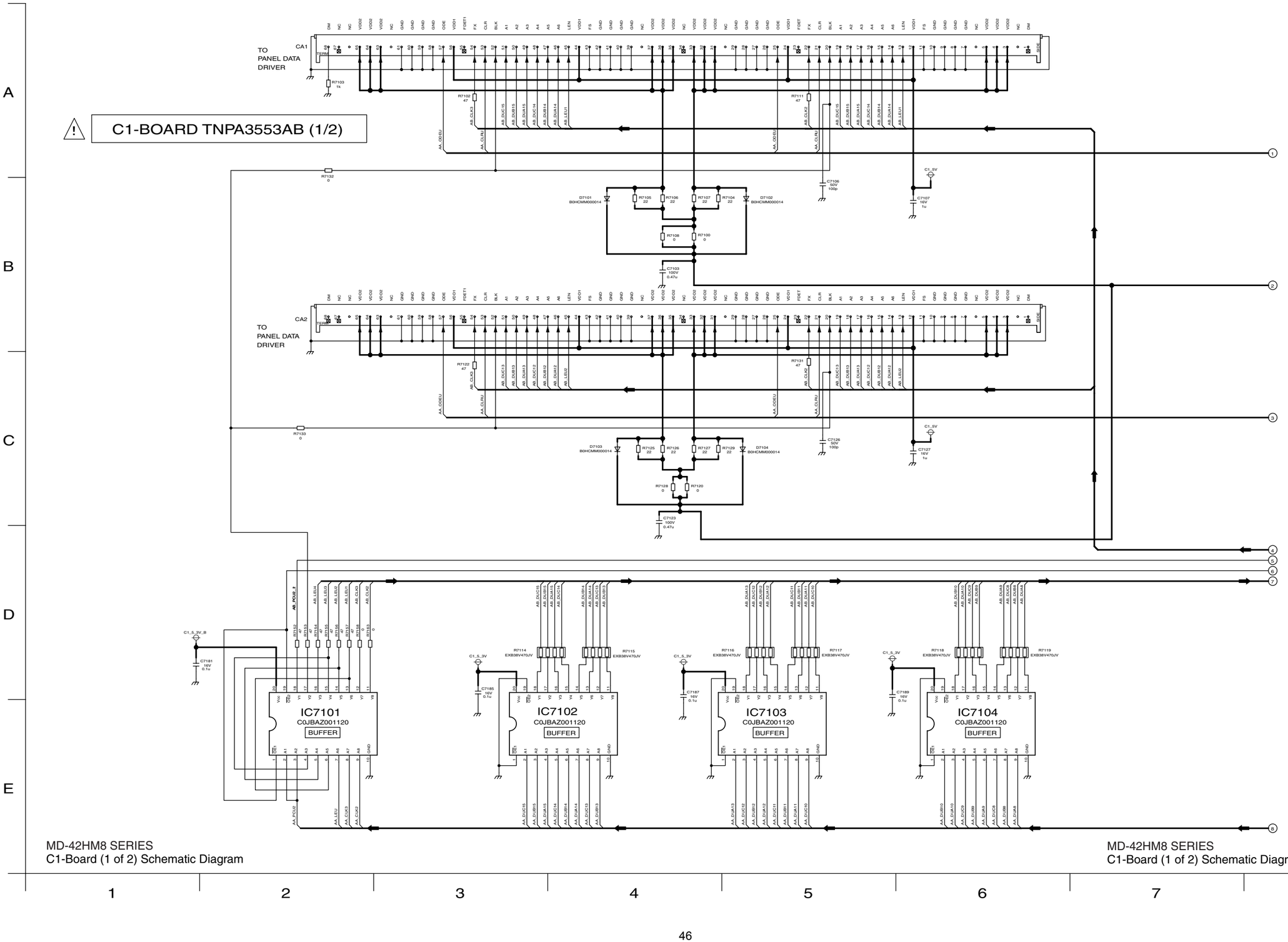
10.13. C1, C2, C3 and C4-Board Block Diagram



MD-42HM8 SERIES
C1, C2, C3 and C4-Board Block Diagram

MD-42HM8 SERIES
C1, C2, C3 and C4-Board Block Diagram

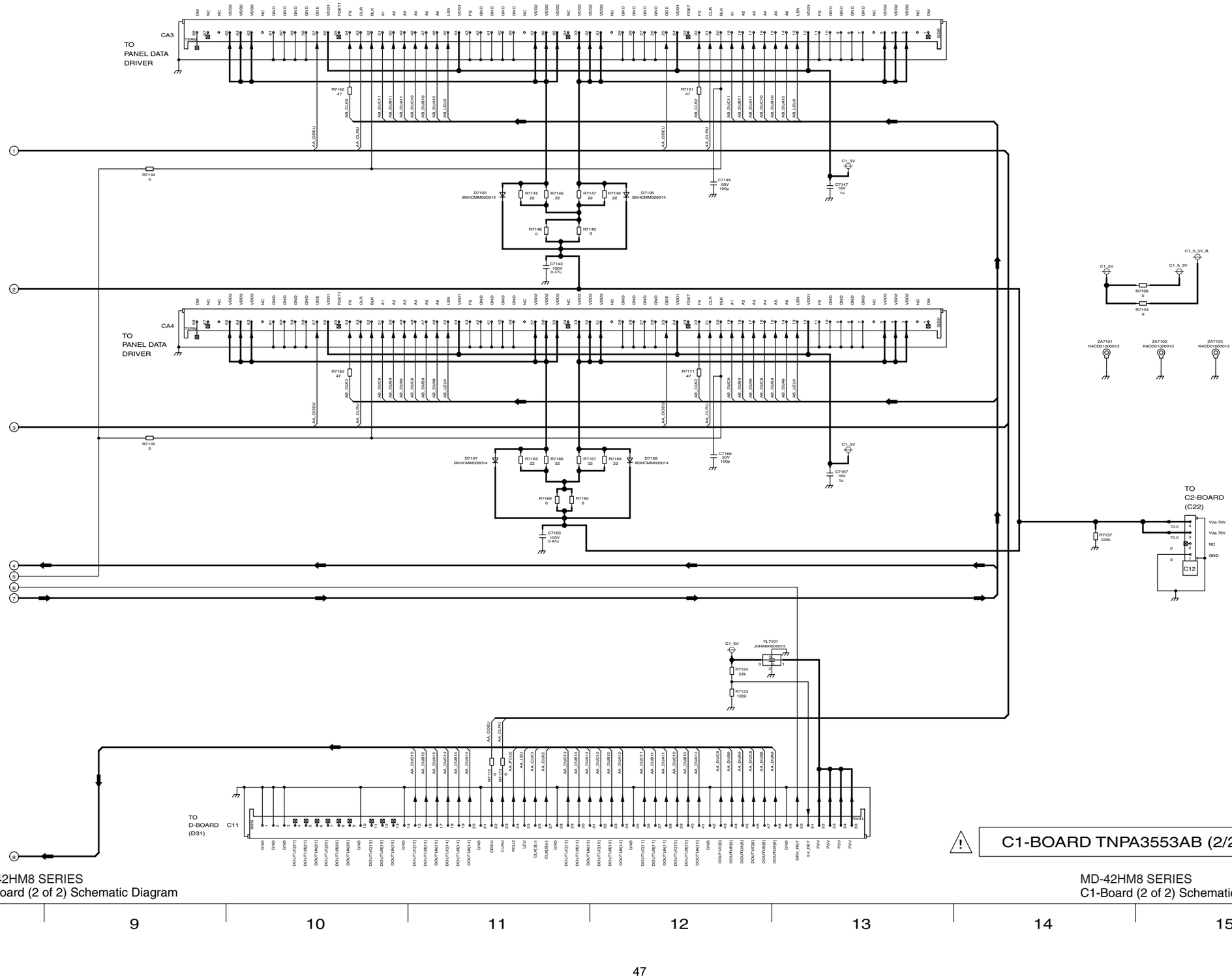
10.14. C1-Board (1 of 2) Schematic Diagram



MD-42HM8 SERIES
C1-Board (1 of 2) Schematic Diagram

MD-42HM8 SERIES
C1-Board (1 of 2) Schematic Diagram

10.15. C1-Board (2 of 2) Schematic Diagram



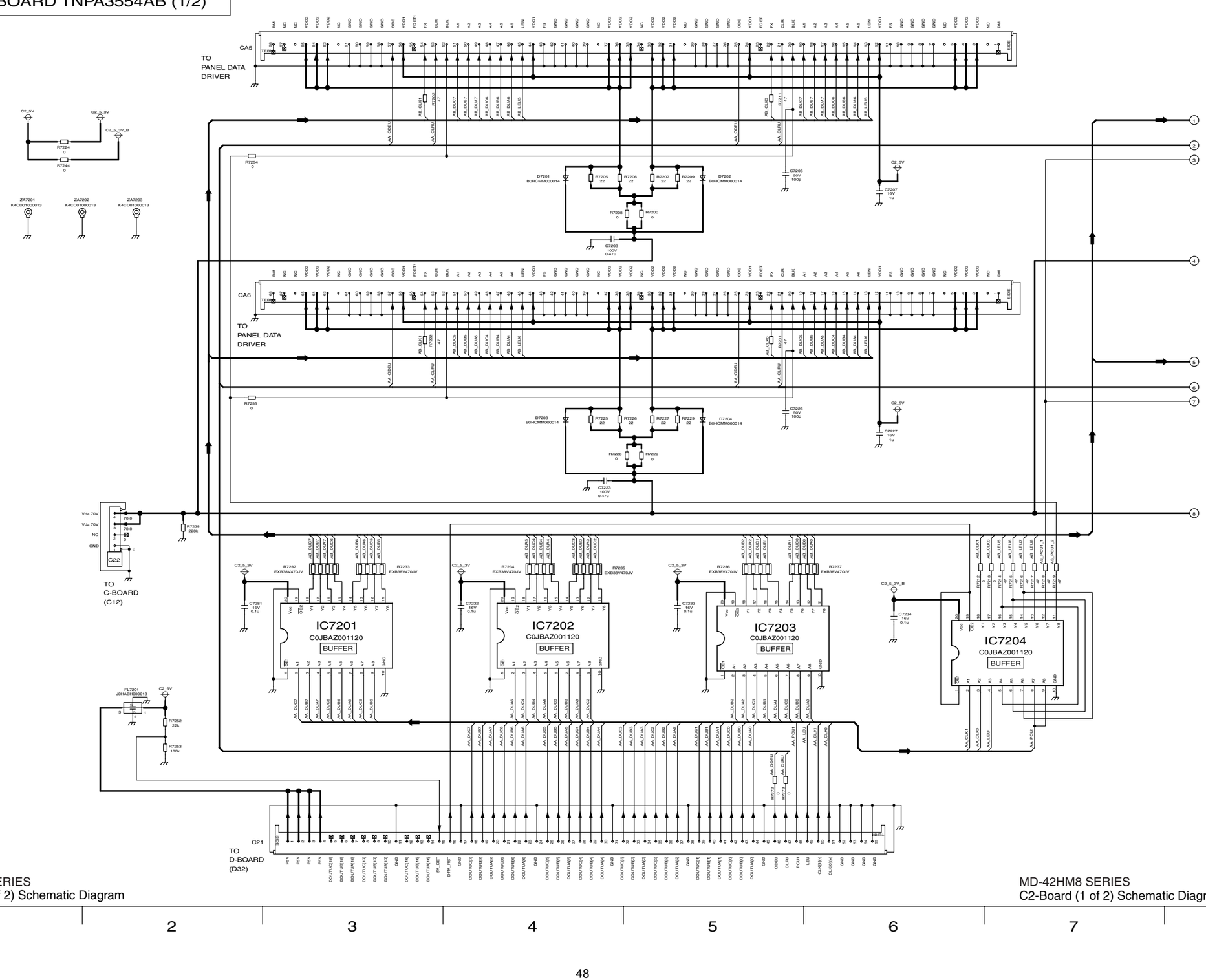
C1-BOARD TNPA3553AB (2/2)

MD-42HM8 SERIES
C1-Board (2 of 2) Schematic Diagram

MD-42HM8 SERIES
C1-Board (2 of 2) Schematic Diagram

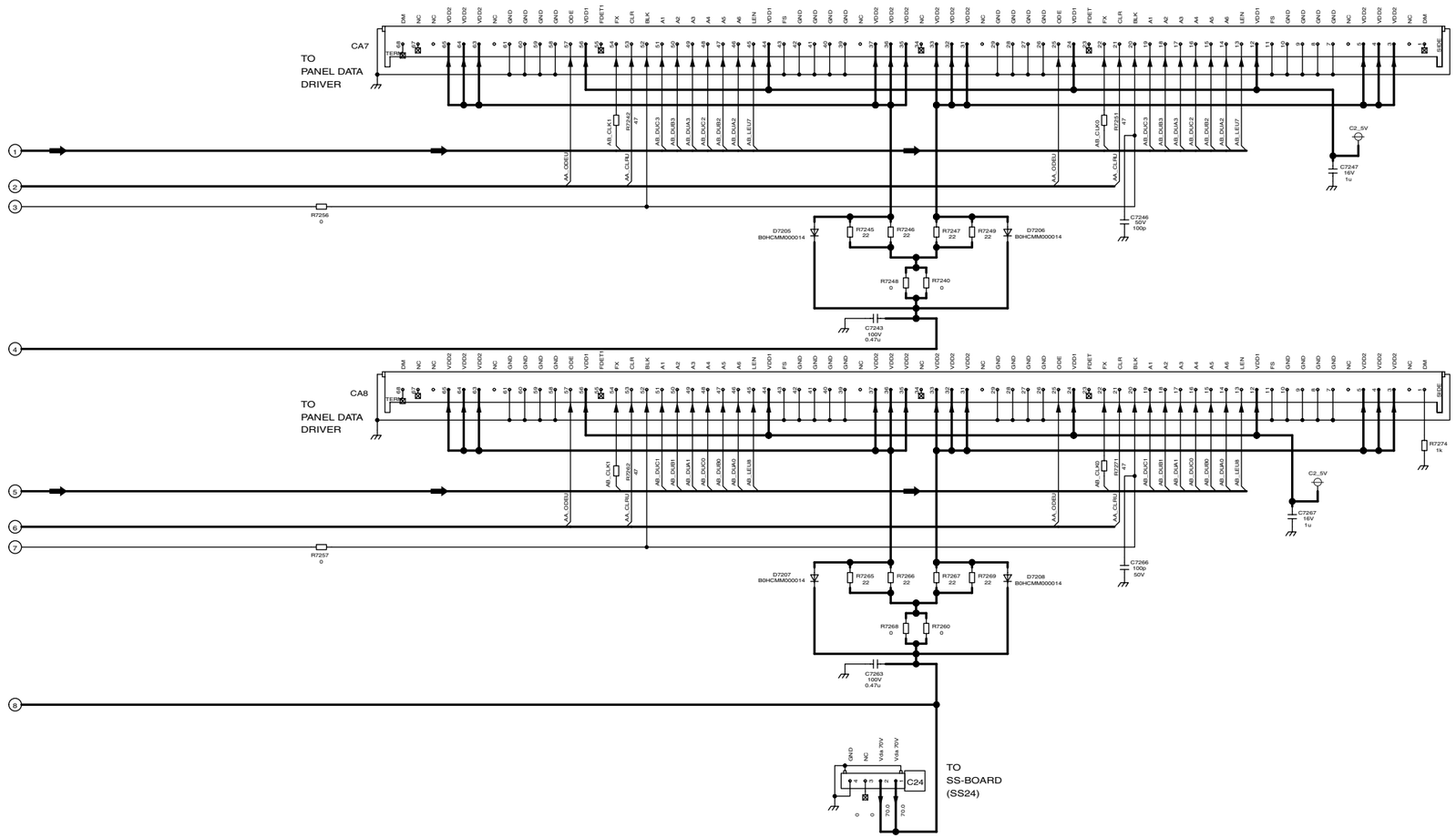
10.16. C2-Board (1 of 2) Schematic Diagram

C2-BOARD TNPA3554AB (1/2)



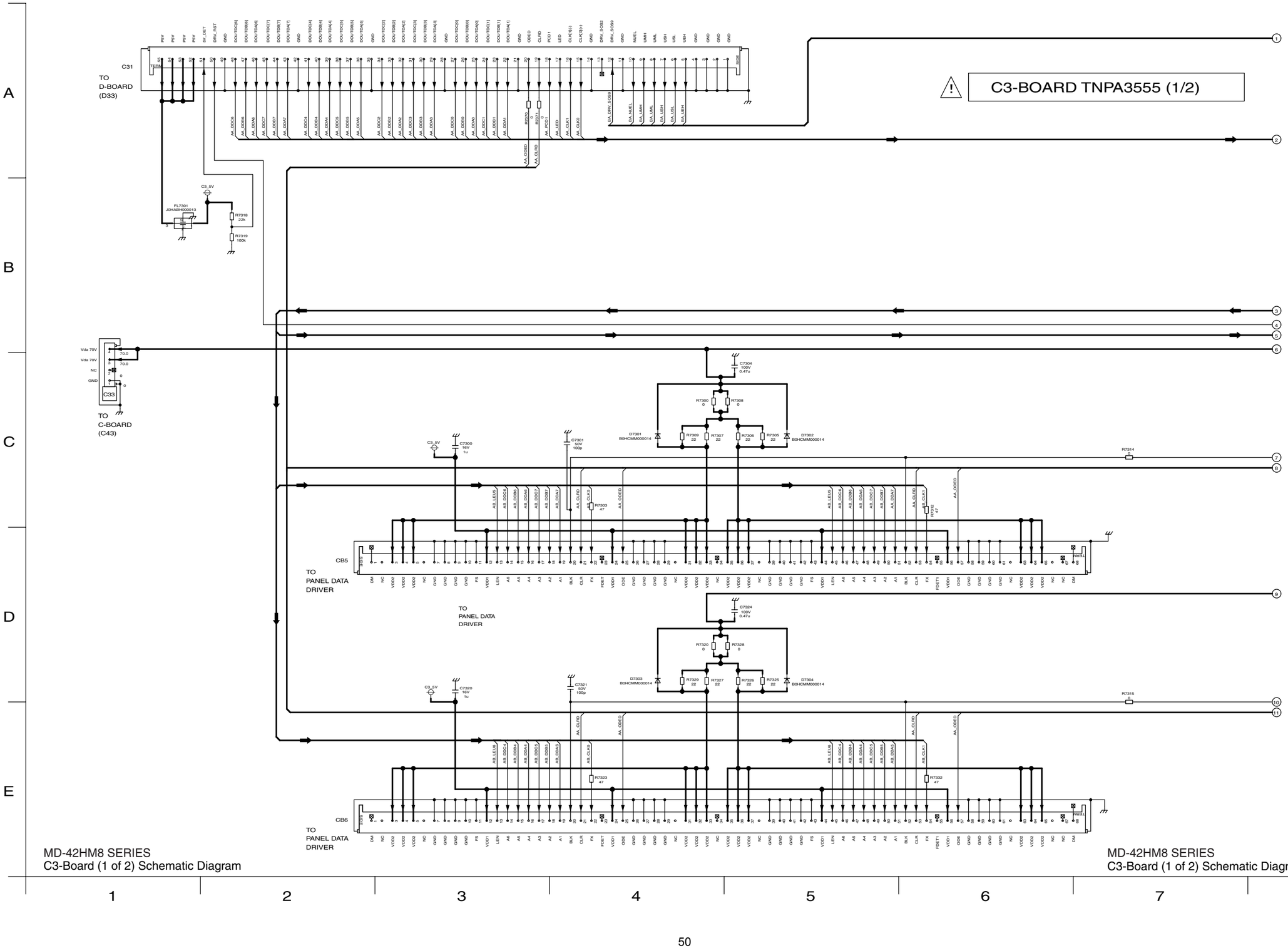
MD-42HM8 SERIES
C2-Board (1 of 2) Schematic Diagram

10.17. C2-Board (2 of 2) Schematic Diagram



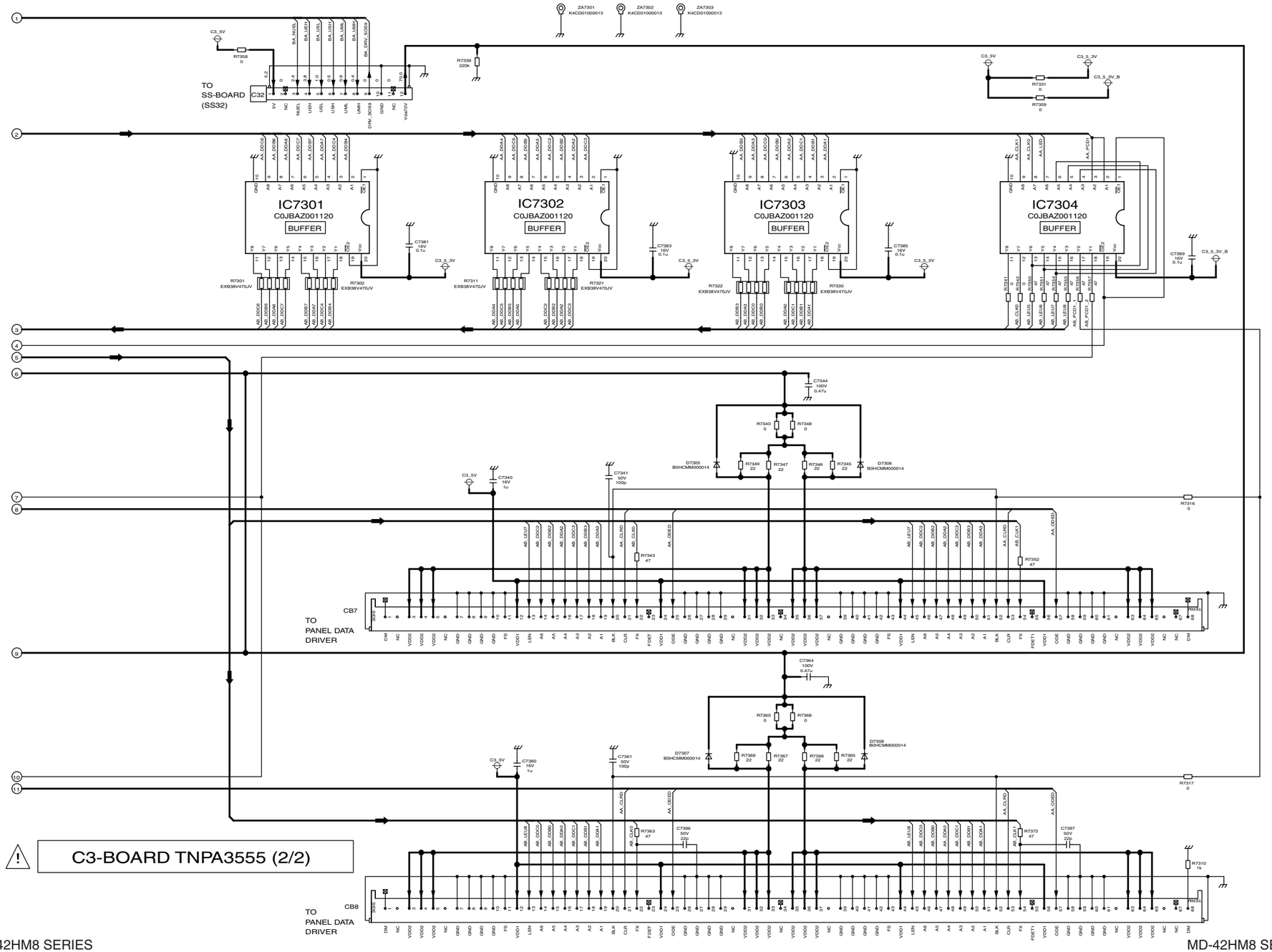
C2-BOARD TNPA3554AB (2/2)

10.18. C3-Board (1 of 2) Schematic Diagram



MD-42HM8 SERIES
C3-Board (1 of 2) Schematic Diagram

10.19. C3-Board (2 of 2) Schematic Diagram

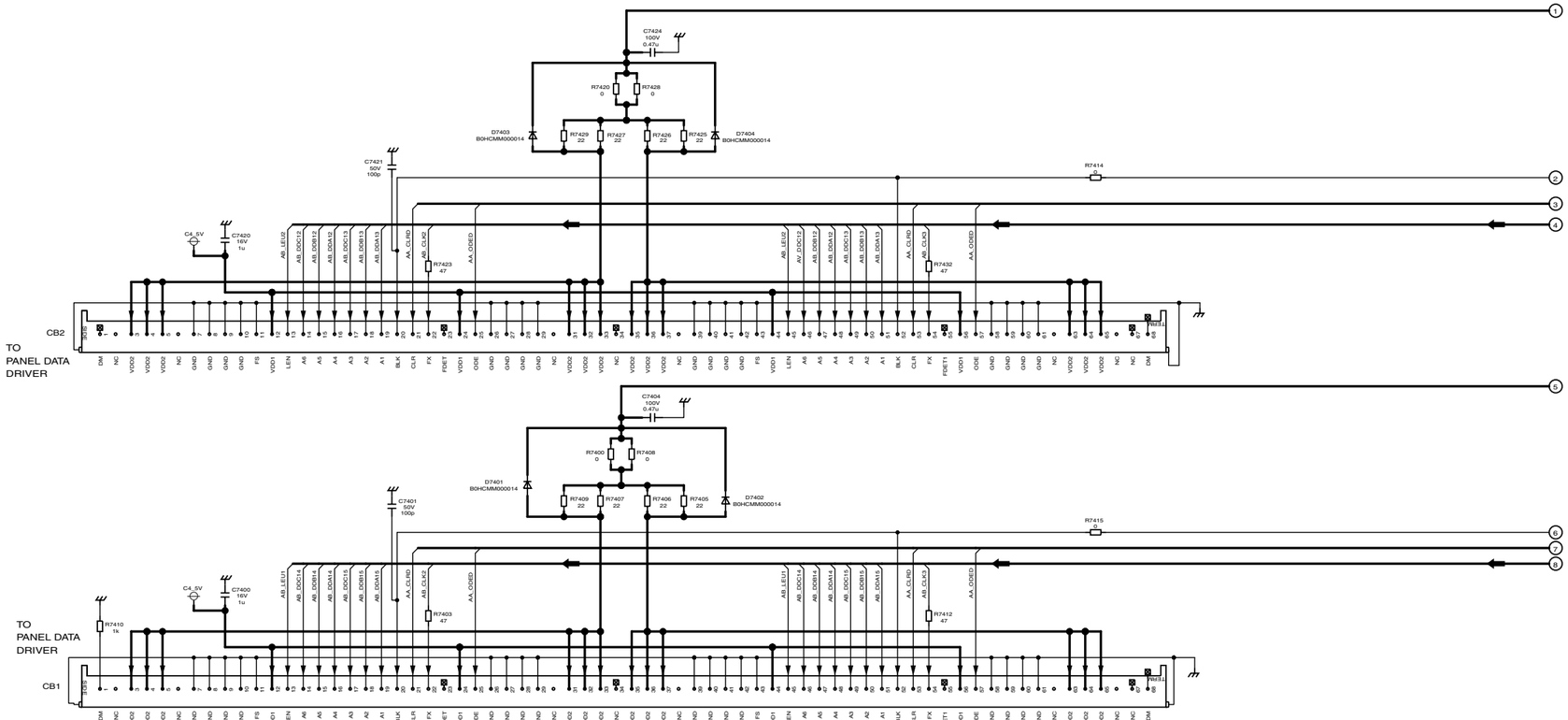


MD-42HM8 SERIES
C3-Board (2 of 2) Schematic Diagram

MD-42HM8 SERIES
C3-Board (2 of 2) Schematic Diagram

10.20. C4-Board (1 of 2) Schematic Diagram

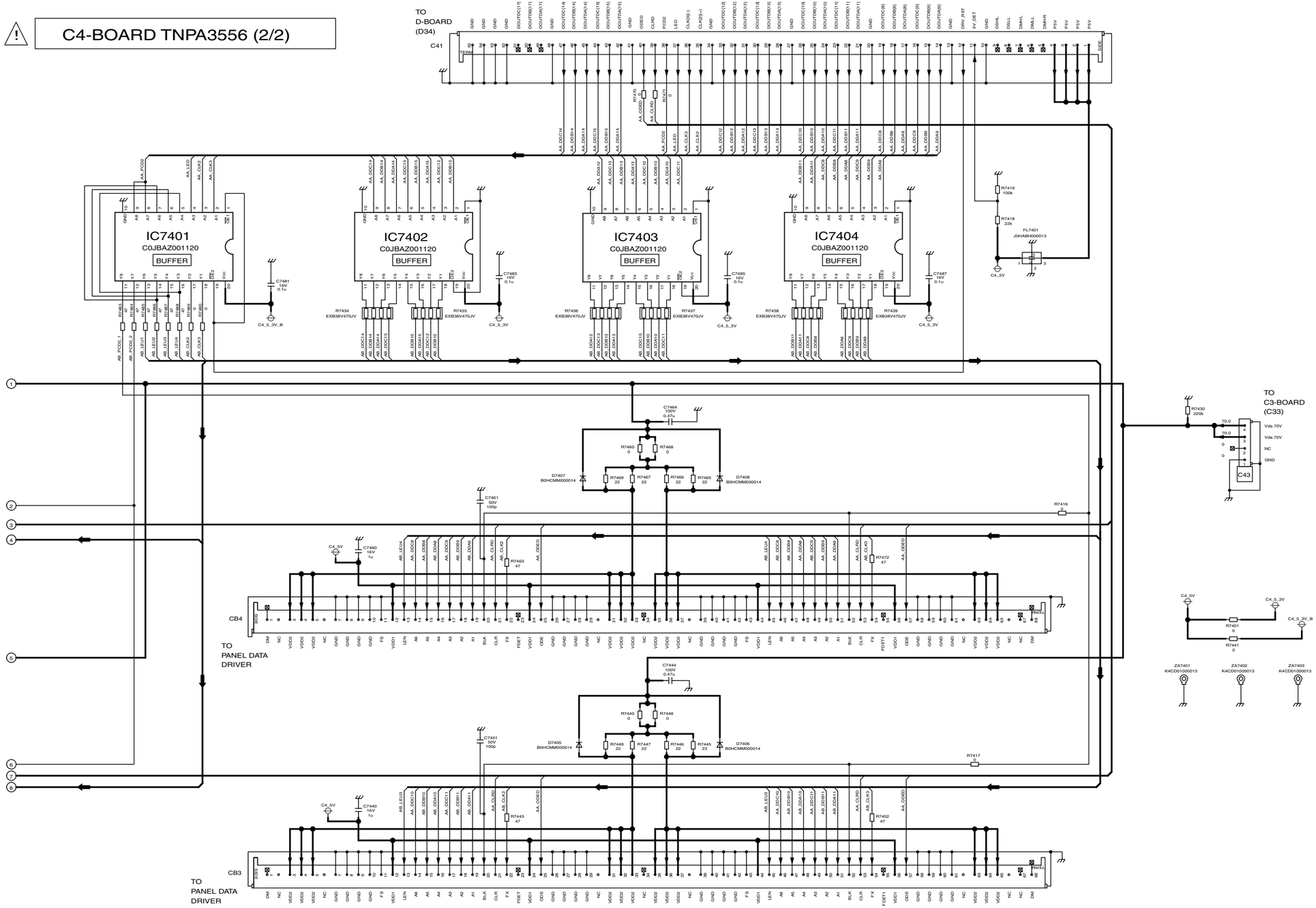
C4-BOARD TNPA3556 (1/2)



MD-42HM8 SERIES
C4-Board (1 of 2) Schematic Diagram

MD-42HM8 SERIES
C4-Board (1 of 2) Schematic Diagram

10.21. C4-Board (2 of 2) Schematic Diagram

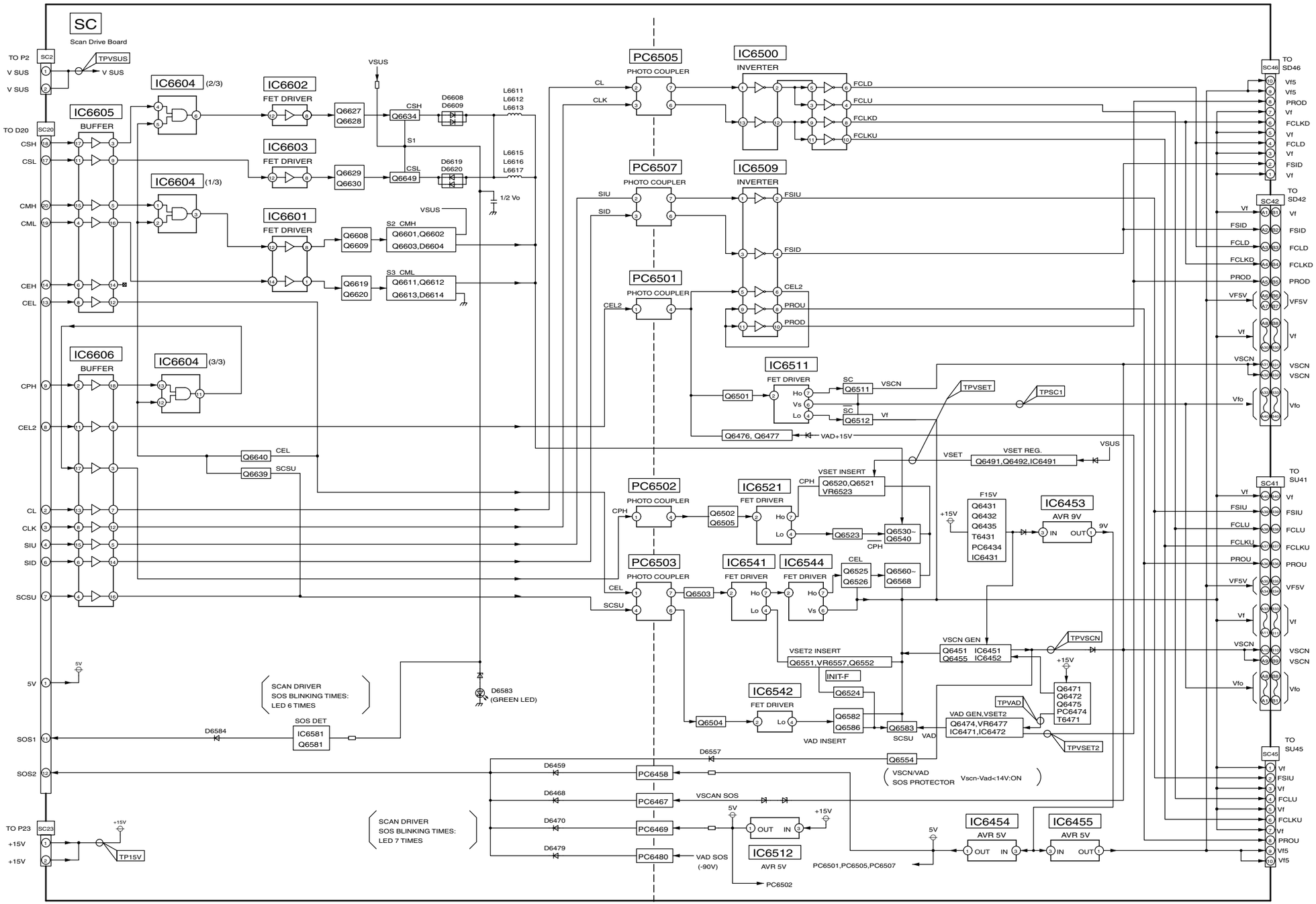


MD-42HM8 SERIES
C4-Board (2 of 2) Schematic Diagram

MD-42HM8 SERIES
C4-Board (2 of 2) Schematic Diagram

8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

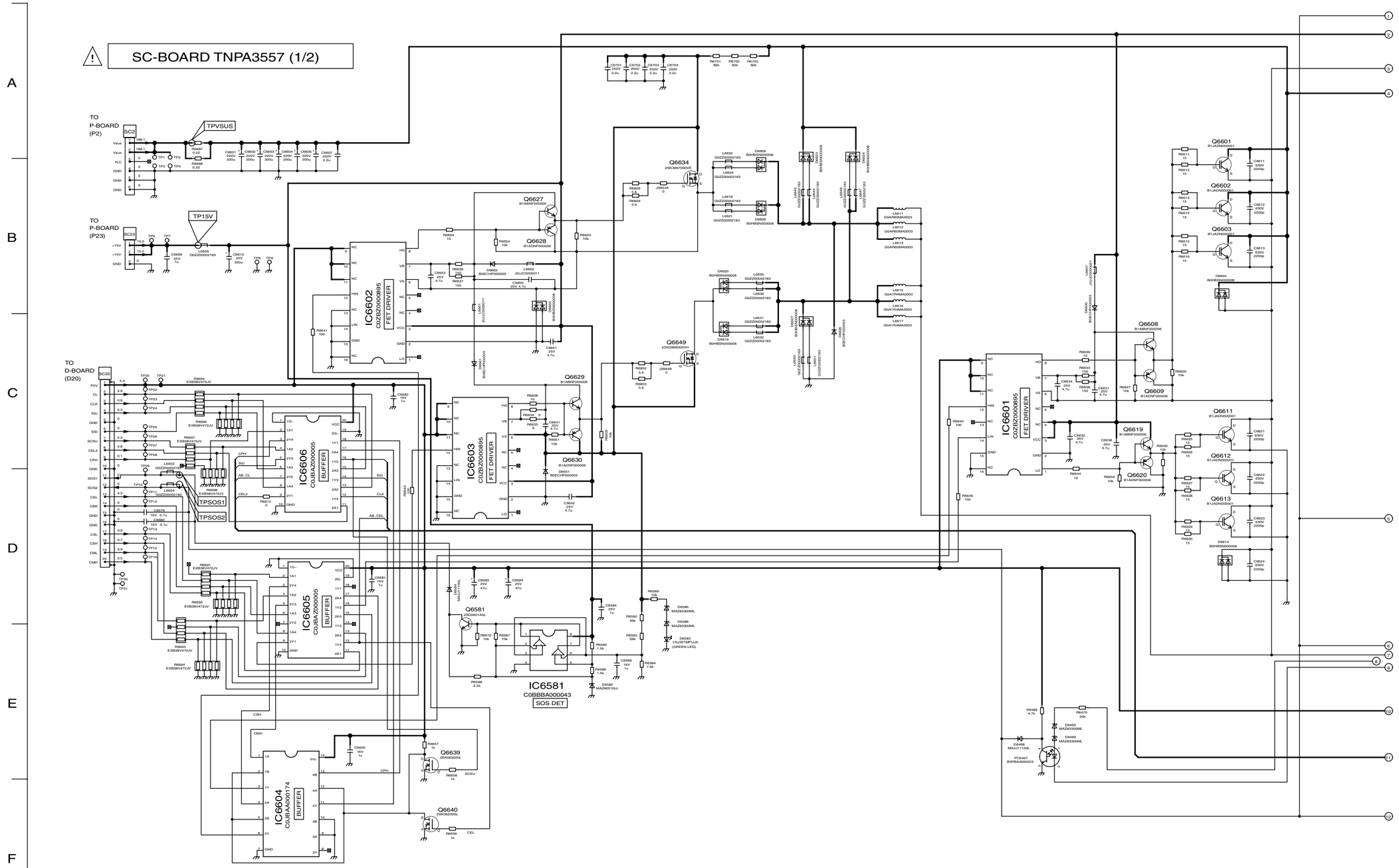
10.22. SC-Board Block Diagram



MD-42HM8 SERIES
SC-Board Block Diagram

MD-42HM8 SERIES
SC-Board Block Diagram

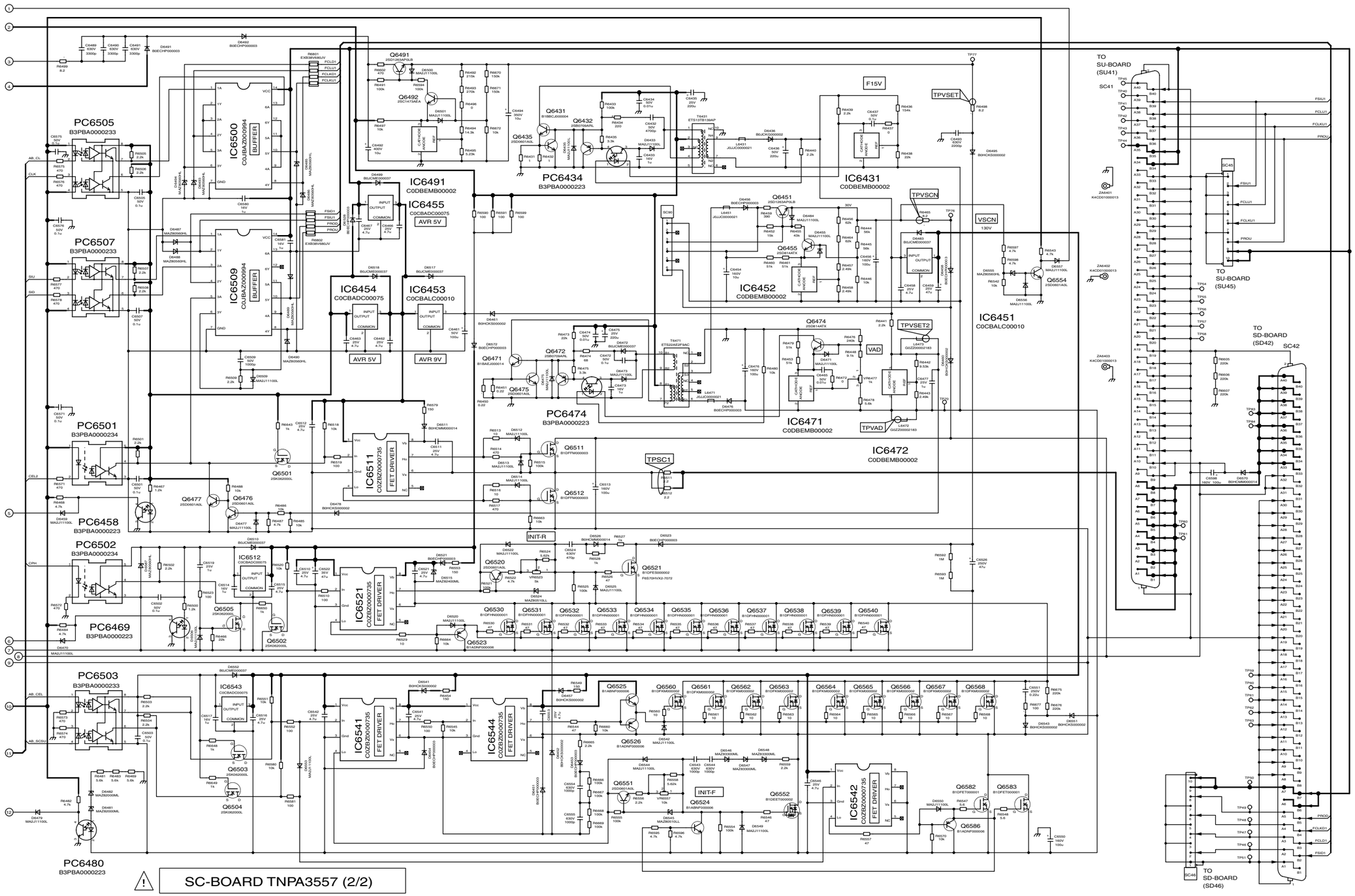
10.23. SC-Board (1 of 2) Schematic Diagram



MD-42HM8 SERIES
SC-Board (1 of 2) Schematic Diagram

MD-42HM8 SERIES
SC-Board (1 of 2) Schematic Diagram

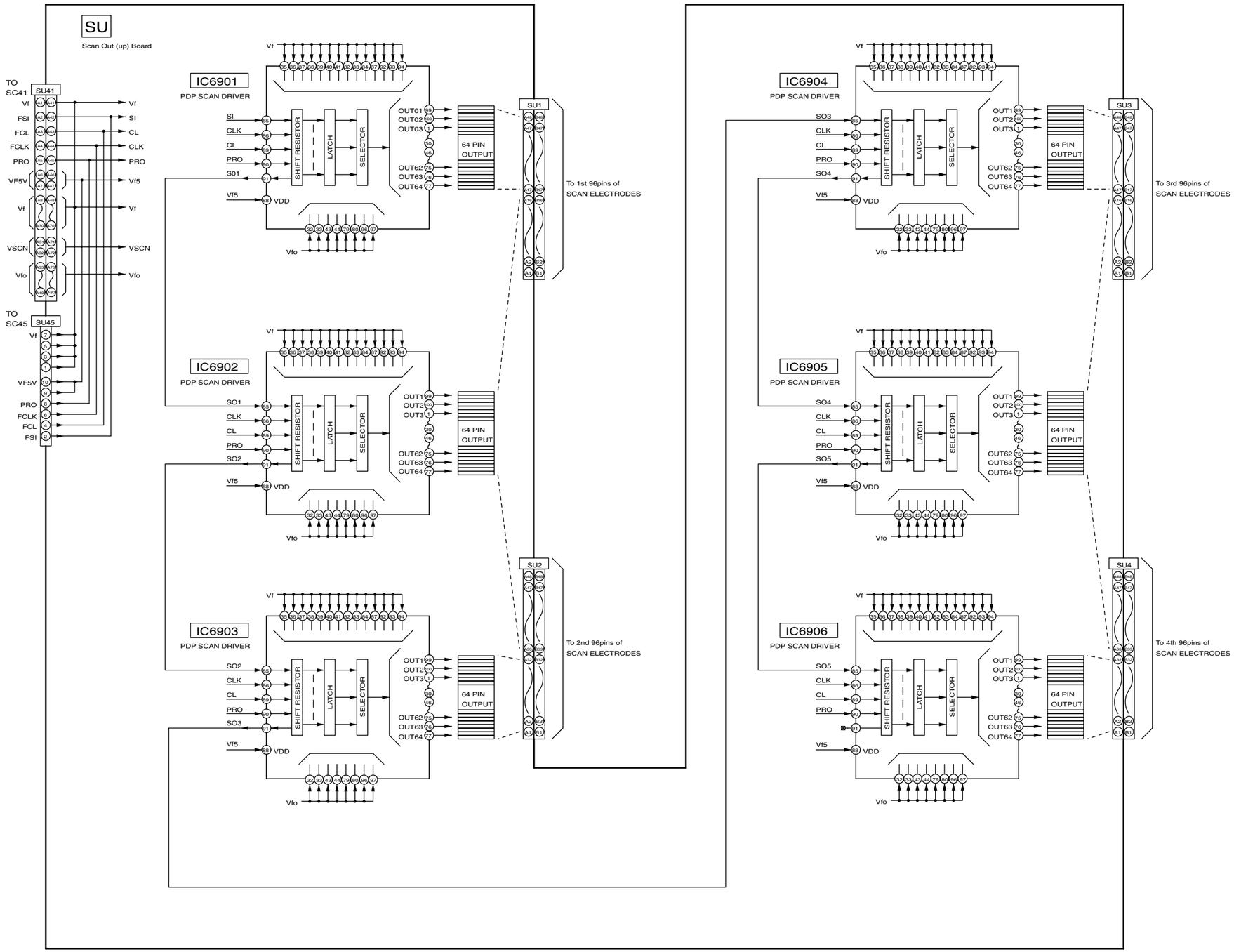
10.24. SC-Board (2 of 2) Schematic Diagram



MD-42HM8 SERIES
SC-Board (2 of 2) Schematic Diagram

MD-42HM8 SERIES
SC-Board (2 of 2) Schematic Diagram

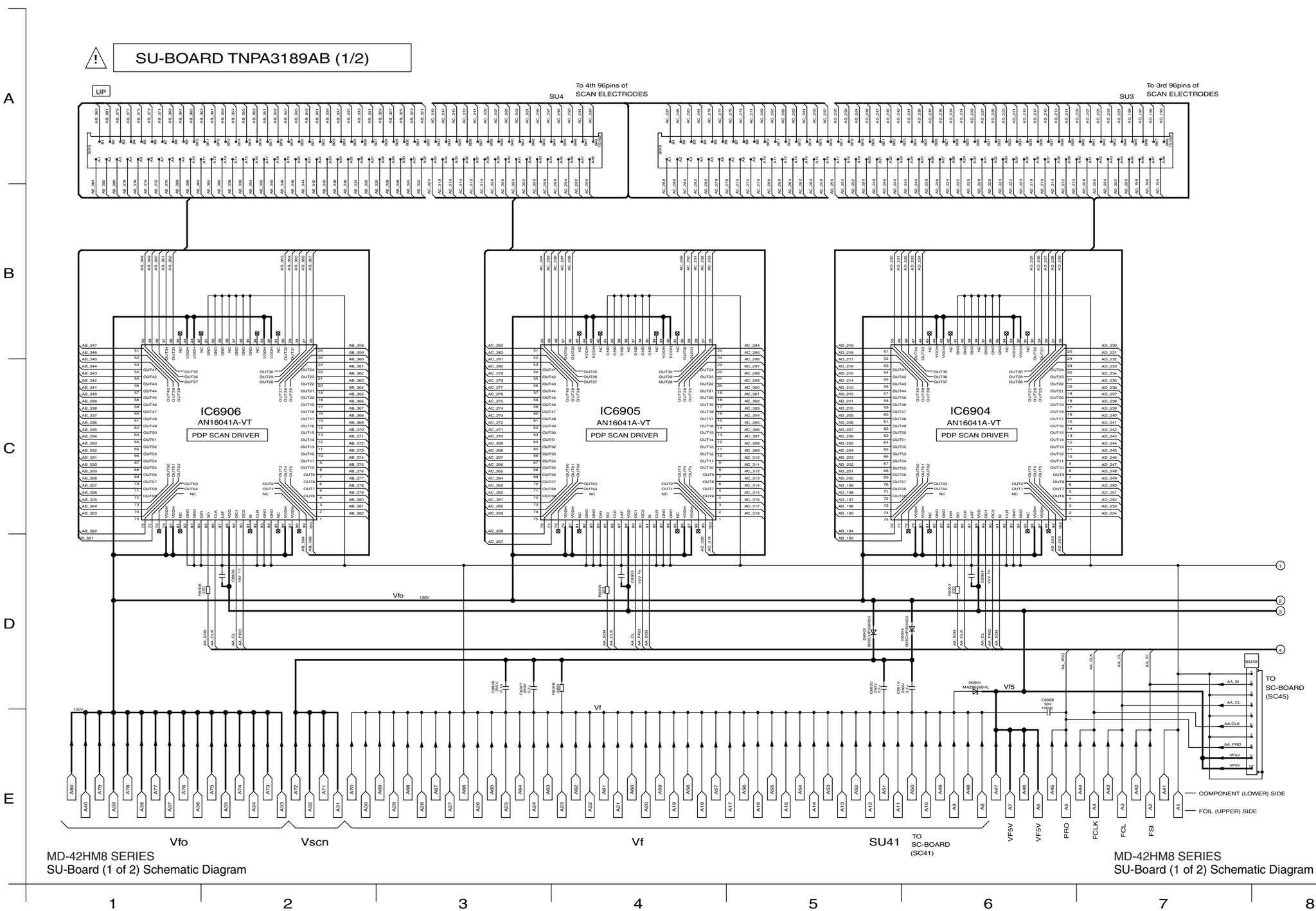
10.25. SU-Board Block Diagram



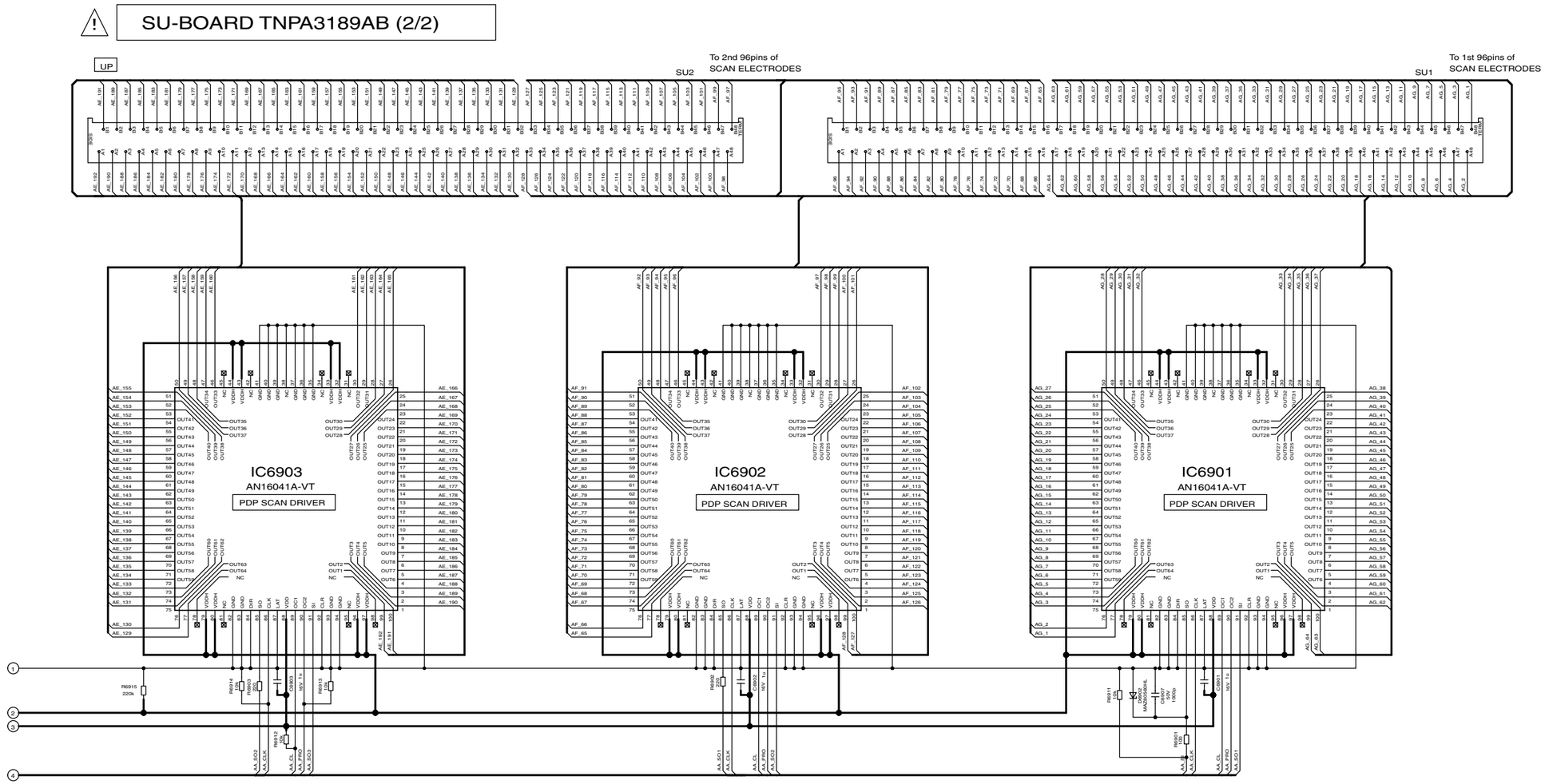
MD-42HM8 SERIES
SU-Board Block Diagram

MD-42HM8 SERIES
SU-Board Block Diagram

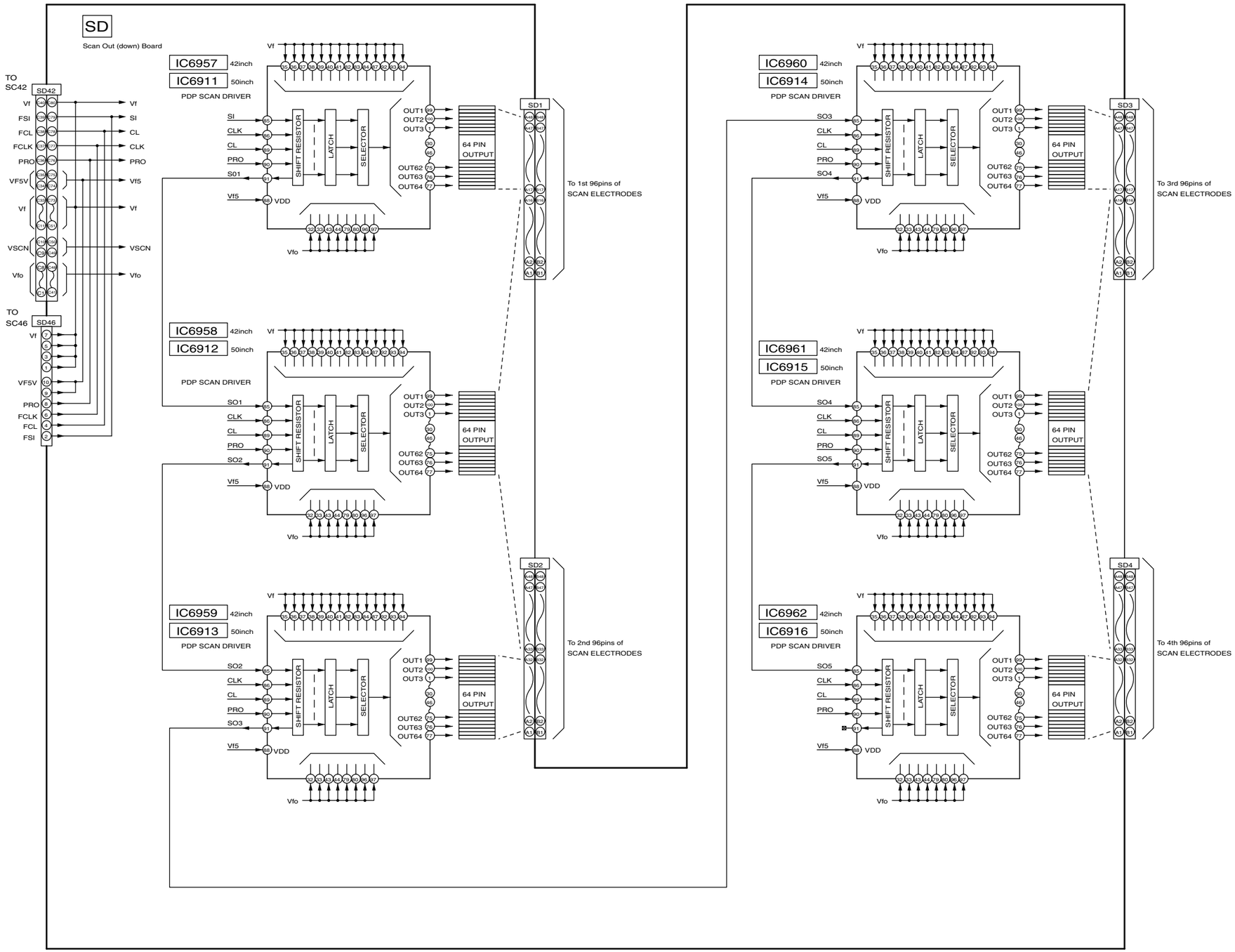
10.26. SU-Board (1 of 2) Schematic Diagram



10.27. SU-Board (2 of 2) Schematic Diagram



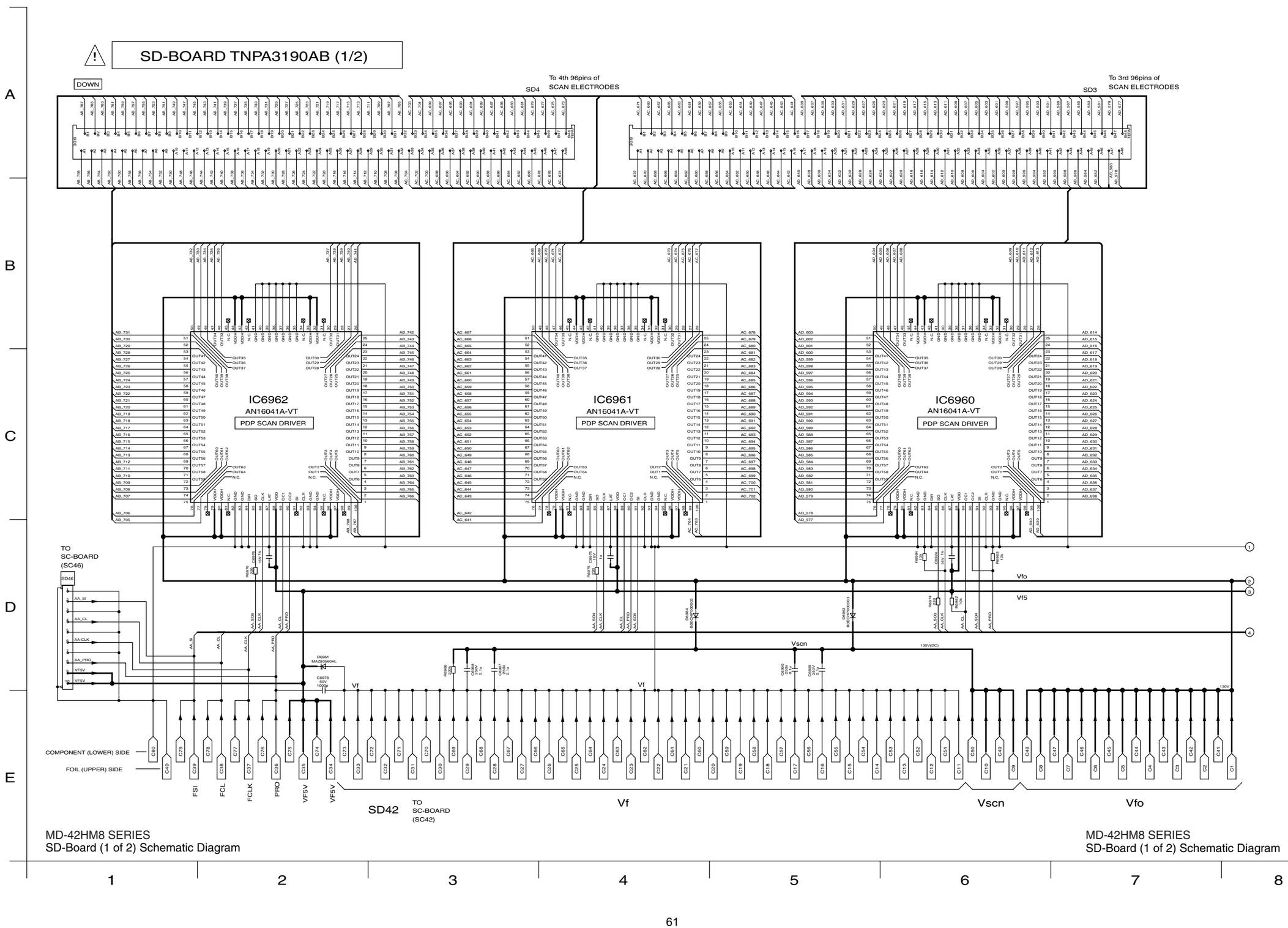
10.28. SD-Board Block Diagram



MD-42HM8 SERIES
SD-Board Block Diagram

MD-42HM8 SERIES
SD-Board Block Diagram

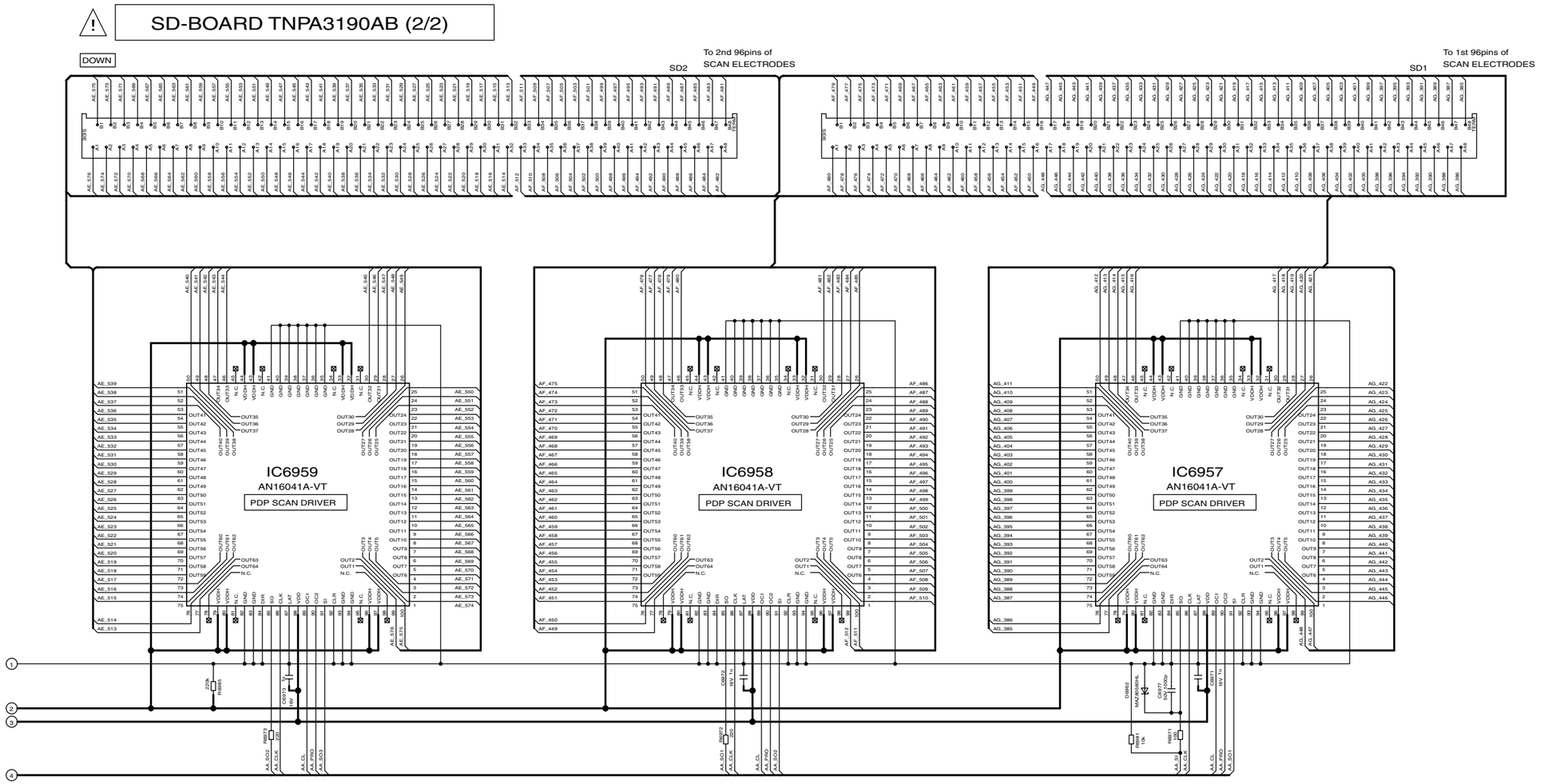
10.29. SD-Board (1 of 2) Schematic Diagram



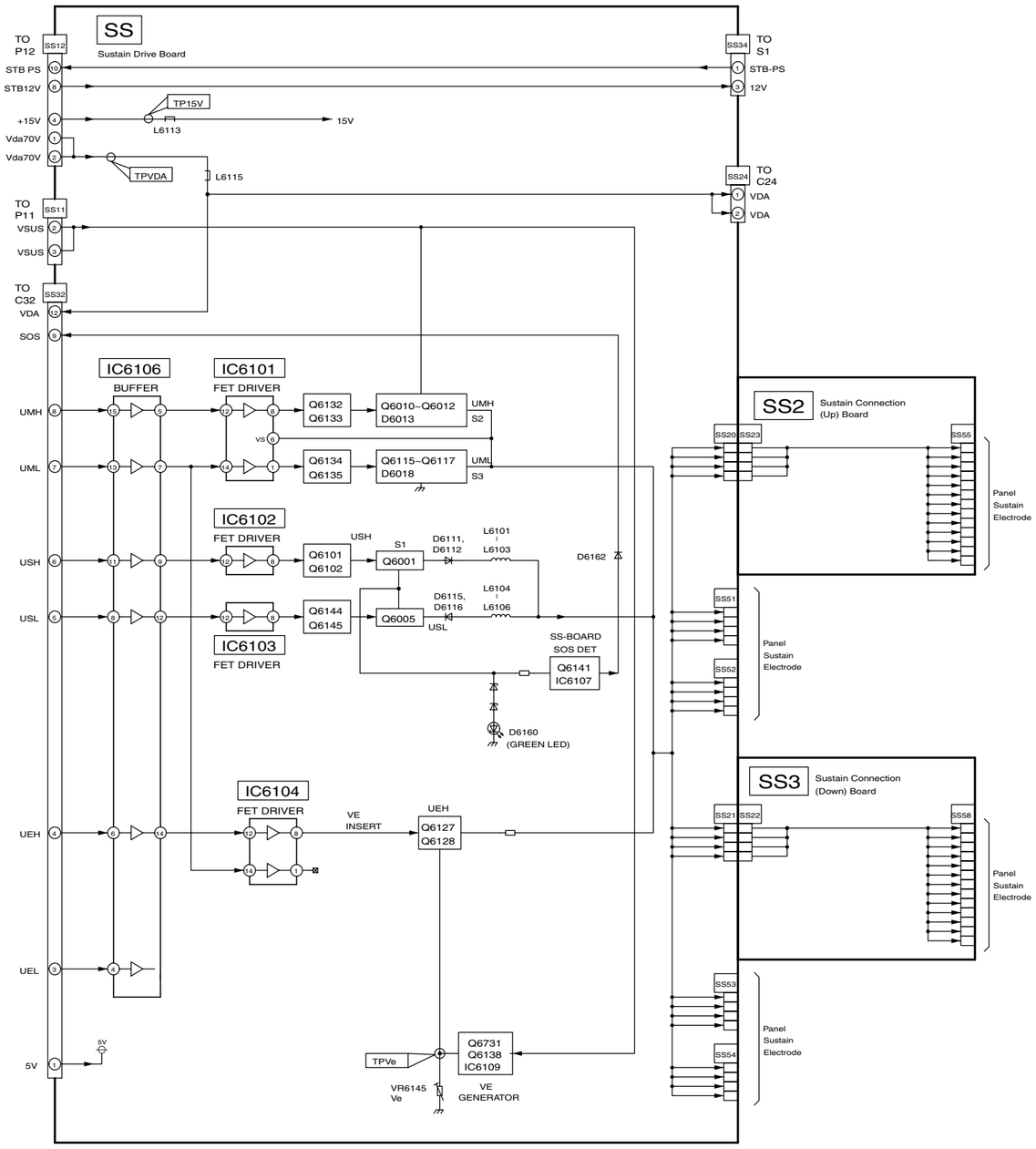
MD-42HM8 SERIES
SD-Board (1 of 2) Schematic Diagram

MD-42HM8 SERIES
SD-Board (1 of 2) Schematic Diagram

10.30. SD-Board (2 of 2) Schematic Diagram



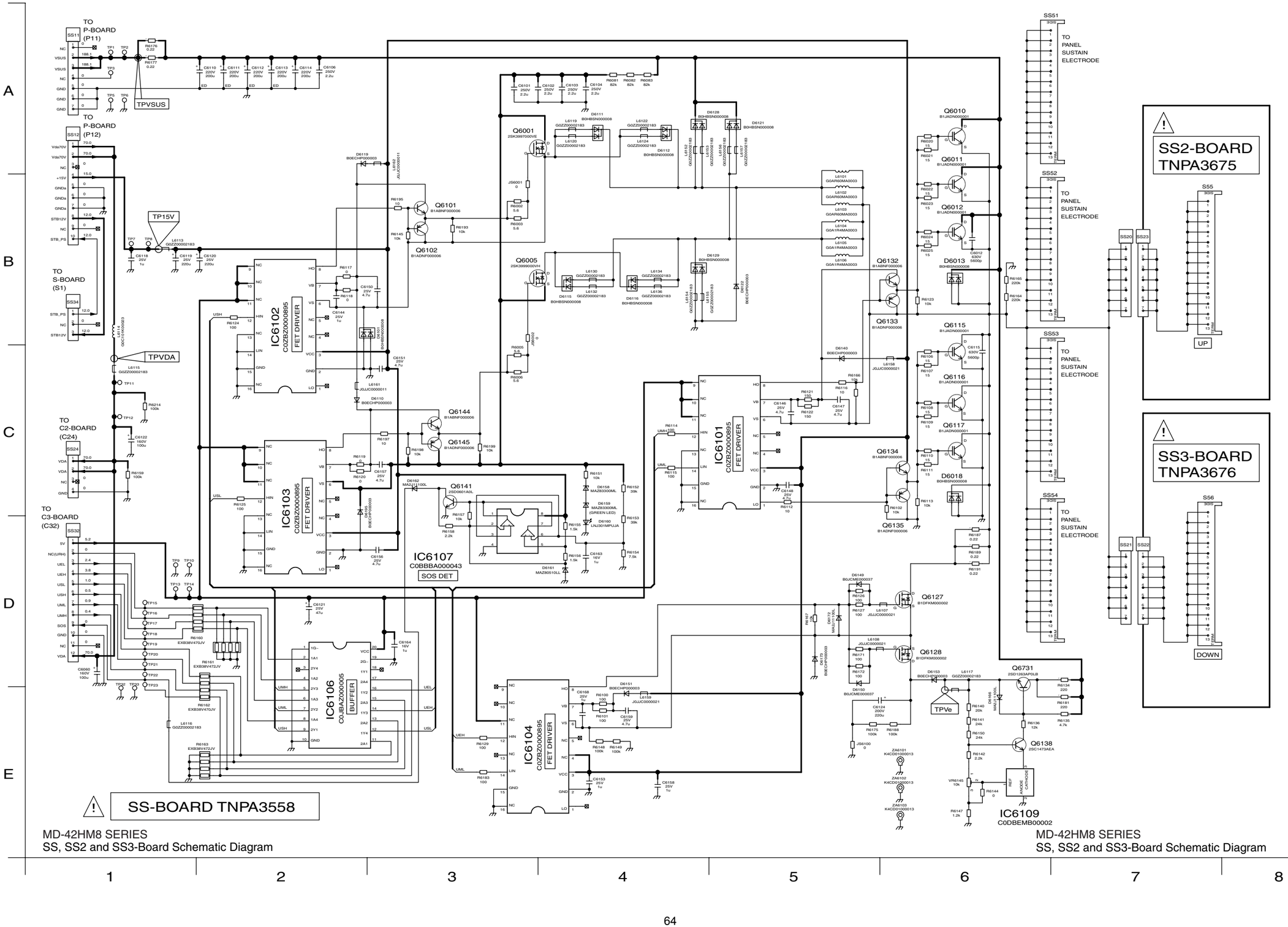
10.31. SS, SS2 and SS3-Board Block Diagram



MD-42HM8 SERIES
SS, SS2 and SS3-Board Block Diagram

MD-42HM8 SERIES
SS, SS2 and SS3-Board Block Diagram

10.32. SS, SS2 and SS3-Board Schematic Diagram



MD-42HM8 SERIES
SS, SS2 and SS3-Board Schematic Diagram

11 Replacement Parts List

11.1. Replacement Parts List Notes

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

Type Allowance

2. Capacitor

Example:

ECKF1H103ZF C 0.01UF, Z, 50V

Type Allowance

Type	Allowance
C : Carbon	F : ±1%
F : Fuse	G : ±2%
M : Metal Oxide	J : ±5%
Metal FIlm	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

Type	Allowance
C : Ceramic	C : ±0.25pF
E : Electrolytic	D : ±0.5pF
P : Polyester	F : ±1pF
Polyprop	G : ±3pF
lene	J : ±5pF
T : Tantalum	K : ±10pF
	L : ±15pF
	M : ±20pF
	P : +100%, -0%
	Z : +80%, -20%

Packing materials for MD-42HM8-N/R (10 units in 1 package) are not available as spare parts.

11.2. Mechanical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	MD42H08AMJ	PLASMA DISPLAY PANEL	1	
	THEL035N	SCREW	75	
	THTD011J	SCREW	3	
	TMM15414-2	CLAMPER	2	
	TMM25401	CLAMPER	3	
	TMME199	CLAMPER	8	
	TPCA95901A	BOTTOM CARTON	1	SSJ
	TPCB82702	CARTON BOX	1	SSJ
	TPD169487	JOINT	4	SSJ
	TPDA0845	CUSHION(BOTTOM/LEFT)	1	SNJ/SRJ
	TPDA0846	CUSHION(BOTTOM/RIGHT)	1	SNJ/SRJ
	TPDA0943	CUSHION(UPPER/LEFT)	1	SSJ
	TPDA0944	CUSHION(BOTTOM/LEFT)	1	SSJ
	TPDA0958	CUSHION (CENTER/UPPER)	1	
	TPDA0960	CUSHION(UPPER/LEFT)	1	
	TPDA0961	CUSHION(UPPER/RIGHT)	1	
	TPDF0596	TOP PAD	1	SSJ
	TPDX0003	TOP COVER	1	SRJ
	TPDX0004	PALETTE(BOTTOM)	1	SRJ
	TPDX0015	PALETTE(BOTTOM)	1	SNJ
	TPDX0016	JOINT	4	SNJ
	TPEH254	SET COVER	1	
	TPGA2080	CUSHION(INSIDE)	2	SRJ
	TPGA2440	TOP COVER	1	SNJ
	TPGA2450	CUSHION(INSIDE)	2	SNJ
	TSXL451	CABLE(D34-C41/D33-C31)	2	
	TSXL463	CABLE(D32-C21/D31-C11)	2	
	TTUA1246	REAR COVER	1	
	XYN3+F10FJ	SCREW	2	
	XYN3+J12FJ	SCREW	33	
	XYN4+F8FJ	SCREW	4	
	XYN8+F15FJK	SCREW	4	
	XZBT6532	POLY BAG	1	

11.3. Electrical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
F603	K5D102BNA007	TIME LAG FUSE HIGH	1	⚠
F601.602	K5D103BMA001	TIME LAG FUSE HIGH	2	⚠
C11	K1MN55BA0076	55P CONNECTOR	1	
C12	K1KA04BA0107	4P CONNECTOR	1	
C21	K1MN55BA0076	55P CONNECTOR	1	
C22	K1KA04BA0107	4P CONNECTOR	1	
C24	K1KA04AA0150	4P CONNECTOR	1	
C31	K1MN55BA0076	55P CONNECTOR	1	
C32	K1KA12AA0153	12P CONNECTOR	1	
C33	K1KA04BA0107	4P CONNECTOR	1	
C41	K1MN55BA0076	55P CONNECTOR	1	
C43	K1KA04BA0107	4P CONNECTOR	1	
C6012	F1L2J562A022	C 5600UF, K,6.3V	1	
C6060	ECA2CM101	E 100UF, 160V	1	
C6101-04	ECQE2255JF	P 2.5UF, K,250V	4	
C6106	ECQE2255JF	P 2.5UF, K,250V	1	
C6110-14	F2A2T201A001	E 200UF,	5	
C6115	F1L2J562A022	C 5600UF, K,6.3V	1	
C6118	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6119,20	EEUFC1E221	E 220UF, 25V	2	
C6121	EEUFC1E470	E 47UF, 25V	1	
C6122	ECA2CM101	E 100UF, 160V	1	
C6124	F2A2D221A022	E 220UF, 200V	1	
C6144	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6146-48	F1L1E4750004	C 4.7UF, 25V	3	
C6150,51	F1L1E4750004	C 4.7UF, 25V	2	
C6153	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6156,57	F1L1E4750004	C 4.7UF, 25V	2	
C6158	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6159	F1L1E4750004	C 4.7UF, 25V	1	
C6163,64	TCUY1C105ZFN	C 1UF, 16V	2	
C6168	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6432	ECJ2XB1H472K	C 4700PF, K, 50V	1	
C6433	TCUY1C105ZFN	C 1UF, 16V	1	
C6434	ECJ2XB1H103K	C 0.01UF, K, 50V	1	
C6435	EEUFC1E221	E 220UF, 25V	1	
C6436	ECA1HM221	E 220UF, 50V	1	
C6437	ECJ2XB1H104K	C 0.1UF, K, 50V	1	
C6454	ECA2CHG100	E 10UF, 160V	1	
C6456	ECA2CM101	E 100UF, 160V	1	
C6458	F1L1E4750004	C 4.7UF, 25V	1	
C6459	EEUFC1E470	E 47UF, 25V	1	
C6461	ECA1HM101	E 100UF, 50V	1	
C6462,63	F1L1E4750004	C 4.7UF, 25V	2	
C6465	ECJ2XB1H103K	C 0.01UF, K, 50V	1	
C6466,67	F1L1E4750004	C 4.7UF, 25V	2	
C6472	ECJ2XB1H104K	C 0.1UF, K, 50V	1	
C6473	TCUY1C105ZFN	C 1UF, 16V	1	
C6474	ECJ2XB1H103K	C 0.01UF, K, 50V	1	
C6475	EEUFC1E221	E 220UF, 25V	1	
C6476	ECA2CM101	E 100UF, 160V	1	
C6477	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6489-91	F1K2J332A014	C 3300UF, K,6.3V	3	
C6492	F2A2G100A017	E 100UF, 400V	1	
C6493	ECJ3XB2J222K	C 2200PF, K,630V	1	
C6494	ECA2VHG100	E 10UF, 350V	1	
C6501-03	ECJ2XB1H104K	C 0.1UF, K, 50V	3	
C6505	ECJ2XB1H104K	C 0.1UF, K, 50V	1	
C6507	ECJ2XB1H104K	C 0.1UF, K, 50V	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6509	ECJ2XC1H102J	C 1000PF, J, 50V	1	
C6510-12	F1L1E4750004	C 4.7UF, 25V	3	
C6513	ECA2CM101	E 100UF, 160V	1	
C6514	TCUY1C105ZFN	C 1UF, 16V	1	
C6515,16	F1L1E4750004	C 4.7UF, 25V	2	
C6517	TCUY1C105ZFN	C 1UF, 16V	1	
C6519	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6521	F1L1E4750004	C 4.7UF, 25V	1	
C6522	ECA1VM470	E 47UF, 35V	1	
C6524	F1K2J471A014	C 470UF, K,6.3V	1	
C6526	ECA2EHG470	E 47UF, 250V	1	
C6541,42	F1L1E4750004	C 4.7UF, 25V	2	
C6543,44	F1K2J102A014	C 1000PF,	2	
C6546	F1L1E4750004	C 4.7UF, 25V	1	
C6550	ECA2CM101	E 100UF, 160V	1	
C6551	ECQE2224KF	P 2.2UF, K,250V	1	
C6553	F1L1E4750004	C 4.7UF, 25V	1	
C6554,55	F1K2J102A014	C 1000PF,	2	
C6571	ECJ2XB1H104K	C 0.1UF, K, 50V	1	
C6575,76	ECJ2XB1H104K	C 0.1UF, K, 50V	2	
C6580,81	TCUY1C105ZFN	C 1UF, 16V	2	
C6584	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6585	TCUY1C105ZFN	C 1UF, 16V	1	
C6598	ECA2CM101	E 100UF, 160V	1	
C6600	TCUY1C105ZFN	C 1UF, 16V	1	
C6601-05	F2A2T201A001	E 200UF,	5	
C6607	ECQE2255JF	P 2.5UF, K,250V	1	
C6609	ECJ3YB1E105K	C 1UF, K, 25V	1	
C6610	EEUFC1E221	E 220UF, 25V	1	
C6611-13	F1L2J222A022	C 2200UF, K,6.3V	3	
C6621-24	F1L2J222A022	C 2200UF, K,6.3V	4	
C6631,32	F1L1E4750004	C 4.7UF, 25V	2	
C6634	F1L1E4750004	C 4.7UF, 25V	1	
C6638	F1L1E4750004	C 4.7UF, 25V	1	
C6641,42	F1L1E4750004	C 4.7UF, 25V	2	
C6650,51	F1L1E4750004	C 4.7UF, 25V	2	
C6653	F1L1E4750004	C 4.7UF, 25V	1	
C6679,80	ECJ1XF1C104Z	C 0.1UF, Z, 16V	2	
C6681,82	TCUY1C105ZFN	C 1UF, 16V	2	
C6683,84	EEUFC1E470	E 47UF, 25V	2	
C6701-04	ECQE2255JF	P 2.5UF, K,250V	4	
C6901-06	TCUY1C105ZFN	C 1UF, 16V	6	
C6907,08	ECJ2XB1H102K	C 1000PF, K, 50V	2	
C6917-20	F1L2E1040002	E 1000UF, 25V	4	
C6971-76	TCUY1C105ZFN	C 1UF, 16V	6	
C6977,78	ECJ2XB1H102K	C 1000PF, K, 50V	2	
C6987-90	F1L2E1040002	E 1000UF, 25V	4	
C7103	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7106	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7107	TCUY1C105ZFN	C 1UF, 16V	1	
C7123	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7126	ECJ1XC1H101J	C 100PF, J, 50V	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7127	TCUY1C105ZFN	C 1UF, 16V	1	
C7143	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7146	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7147	TCUY1C105ZFN	C 1UF, 16V	1	
C7163	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7166	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7167	TCUY1C105ZFN	C 1UF, 16V	1	
C7181	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7185	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7187	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7189	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7203	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7206	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7207	TCUY1C105ZFN	C 1UF, 16V	1	
C7223	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7226	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7227	TCUY1C105ZFN	C 1UF, 16V	1	
C7232-34	ECJ1XB1C104K	C 0.1UF, Z, 16V	3	
C7243	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7246	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7247	TCUY1C105ZFN	C 1UF, 16V	1	
C7263	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7266	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7267	TCUY1C105ZFN	C 1UF, 16V	1	
C7281	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7300	TCUY1C105ZFN	C 1UF, 16V	1	
C7301	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7304	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7320	TCUY1C105ZFN	C 1UF, 16V	1	
C7321	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7324	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7340	TCUY1C105ZFN	C 1UF, 16V	1	
C7341	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7344	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7360	TCUY1C105ZFN	C 1UF, 16V	1	
C7361	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7364	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7381	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7383	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7385	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7389	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7396,97	ECJ1XC1H220J	C 22PF, J, 50V	2	
C7400	TCUY1C105ZFN	C 1UF, 16V	1	
C7401	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7404	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7420	TCUY1C105ZFN	C 1UF, 16V	1	
C7421	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7424	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7440	TCUY1C105ZFN	C 1UF, 16V	1	
C7441	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7444	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7460	TCUY1C105ZFN	C 1UF, 16V	1	
C7461	ECJ1XC1H101J	C 100PF, J, 50V	1	
C7464	ECJ3XB2A474K	C 0.47UF, 6.3V	1	
C7481	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7483	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7485	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C7487	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C9000	EEEHB1C470P	C 47PF, J, 16V	1	
C9001	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9004,05	ECJ1XF1C104Z	C 0.1UF, Z, 16V	2	
C9006	F1J0J1060004	C 0.010UF, K, 16V	1	
C9007	EEEHB1C470P	C 47PF, J, 16V	1	
C9008	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9009	F1J0J1060004	C 0.010UF, K, 16V	1	
C9010-12	ECJ1XF1C104Z	C 0.1UF, Z, 16V	3	
C9013	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
C9014	ECJ1XC1H101K	C 100PF, K, 50V	1	
C9015-22	ECJ1XF1C104Z	C 0.1UF, Z, 16V	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C9023	EEEHB1C470P	C 47PF, J, 16V	1	
C9024	ECJ1XC1H271J	C 270PF, J, 50V	1	
C9025	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9026,27	ECJ2VF1C105Z	C 1UF, Z, 16V	2	
C9028-31	ECJ1XF1C104Z	C 0.1UF, Z, 16V	4	
C9033	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9035,36	ECJ1XF1C104Z	C 0.1UF, Z, 16V	2	
C9201,02	ECJ1XB1C104K	C 0.1UF, Z, 16V	2	
C9203,04	ECJ1VC1H100C	C 10PF, C, 50V	2	
C9205	F1J0J1060004	C 0.010UF, K, 16V	1	
C9206,07	ECJ1XB1C104K	C 0.1UF, Z, 16V	2	
C9303	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9304-57	ECJ1XB1C104K	C 0.1UF, Z, 16V	54	
C9358	EEEHB0G221P	C 220PF, J, 4V	1	
C9359	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C9360	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9500	ECJ2VF1C105Z	C 1UF, Z, 16V	1	
C9502	ECJ2VF1C105Z	C 1UF, Z, 16V	1	
C9503-12	ECJ1XB1C104K	C 0.1UF, Z, 16V	10	
C9513	EEEHB1C470P	C 47PF, J, 16V	1	
C9514-17	ECJ1XB1C104K	C 0.1UF, Z, 16V	4	
C9518	EEEHB1C470P	C 47PF, J, 16V	1	
C9519	ECJ1XC1H101K	C 100PF, K, 50V	1	
C9701,02	ECJ1XF1C104Z	C 0.1UF, Z, 16V	2	
C9703	F1J0J1060004	C 0.010UF, K, 16V	1	
C9705,06	F1J0J1060004	C 0.010UF, K, 16V	2	
C9707	EEEHB1C470P	C 47PF, J, 16V	1	
C9712,13	F1J0J1060004	C 0.010UF, K, 16V	2	
C9714,15	ECGRL0G680R	C 68PF, J, 4V	2	
C9716	ECJ1XC1H220J	C 22PF, J, 50V	1	
C9718	ECJ1XC1H220J	C 22PF, J, 50V	1	
C9719,20	ECJ1XC1H102J	C 1000PF, J, 50V	2	
C9721,22	ECJ1XF1C104Z	C 0.1UF, Z, 16V	2	
C9723,24	ECJ2XB1H104K	C 0.1UF, K, 50V	2	
C9725	ECJ1XC1H102J	C 1000PF, J, 50V	1	
C9727	ECJ1XC1H102J	C 1000PF, J, 50V	1	
C9728	ECJ3YB1E475K	C 4.7UF, K, 25V	1	
C9729	ECJ3XF1C475Z	C 4.7UF, Z, 16V	1	
C9730	EEEHB1E470P	C 47PF, J, 25V	1	
C9731	EEEHB1C470P	C 47PF, J, 16V	1	
C9732	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
C9733	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9734,35	EEEHB1C470P	C 47PF, J, 16V	2	
C9736	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C9739,40	ECJ1XB1C104K	C 0.1UF, Z, 16V	2	
C9741	ECJ3YB1E475K	C 4.7UF, K, 25V	1	
C9742	ECJ1XF1E104Z	C 0.1UF, Z, 25V	1	
C9743,44	ECJ3YB1E475K	C 4.7UF, K, 25V	2	
C9800,01	ECJ1VF1H103Z	C 0.010UF, Z, 50V	2	
C9900,01	ECJ1VF1H103Z	C 0.010UF, Z, 50V	2	
CA1-A8	K1MN68BA0002	68P CONNECTOR	8	
CB1-B8	K1MN68BA0002	68P CONNECTOR	8	
D3	K1KA30AA0009	30P CONNECTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D4	K1KA14A00248	14P CONNECTOR	1	
D5	K1KB31AA0140	31P CONNECTOR	1	
D6	K1KA20A00310	20P CONNECTOR	1	
D8	K1KA08AA0104	8P CONNECTOR	1	
D20	K1KA20AA0008	20P CONNECTOR	1	
D25	K1KA20AA0009	20P CONNECTOR	1	
D31-34	K1MN55BA0094	55P CONNECTOR	4	
D6013	B0HBSN000008	DIODE	1	
D6018	B0HBSN000008	DIODE	1	
D6101	B0HBSN000008	DIODE	1	
D6110	B0ECHP000003	DIODE	1	
D6111,12	B0HBSN000008	DIODE	2	
D6115,16	B0HBSN000008	DIODE	2	
D6119	B0ECHP000003	DIODE	1	
D6121	B0HBSN000008	DIODE	1	
D6122	B0ECHP000003	DIODE	1	
D6128,29	B0HBSN000008	DIODE	2	
D6140,41	B0ECHP000003	DIODE	2	
D6149,50	B0JCME000037	DIODE	2	
D6151	B0ECHP000003	DIODE	1	
D6153	B0ECHP000003	DIODE	1	
D6158,59	MA8330M	ZENER DIODE	2	
D6160	LNJ301MPUJA	LED	1	
D6161	MA8051L	ZENER DIODE	1	
D6162	MA111	DIODE	1	
D6166	MA111	DIODE	1	
D6172	MA111	DIODE	1	
D6173	B0ECHP000003	DIODE	1	
D6195	B0ECHP000003	DIODE	1	
D6433	MA111	DIODE	1	
D6435	MA111	DIODE	1	
D6436	B0JCKG000002	DIODE	1	
D6451	B0ECHP000003	DIODE	1	
D6452	B0HCKS000002	DIODE	1	
D6453,54	B0ECHP000003	DIODE	2	
D6455	MA111	DIODE	1	
D6456	B0ECHP000003	DIODE	1	
D6457	B0HCKS000002	DIODE	1	
D6458	B0ECHP000003	DIODE	1	
D6459	MA111	DIODE	1	
D6460,61	B0HCKS000002	DIODE	2	
D6465,66	MA8330M	ZENER DIODE	2	
D6468	MA111	DIODE	1	
D6470,71	MA111	DIODE	2	
D6472	B0JCME000037	DIODE	1	
D6473	MA111	DIODE	1	
D6475	MA111	DIODE	1	
D6476	B0ECHP000003	DIODE	1	
D6477	MA111	DIODE	1	
D6478	B0HCKS000002	DIODE	1	
D6479	MA111	DIODE	1	
D6481,82	MA8200M	ZENER DIODE	2	
D6483	B0JCME000037	DIODE	1	
D6484	MA111	DIODE	1	
D6485-90	MA8056H	ZENER DIODE	6	
D6491,92	B0ECHP000003	DIODE	2	
D6493,94	MA8056H	ZENER DIODE	2	
D6495	B0HCKS000002	DIODE	1	
D6499	B0JCME000037	DIODE	1	
D6500,01	MA111	DIODE	2	
D6506	MA111	DIODE	1	
D6509	MA111	DIODE	1	
D6510	B0JCME000037	DIODE	1	
D6511	B0HCMM000014	DIODE	1	
D6512-14	MA111	DIODE	3	
D6515	MA8240M	ZENER DIODE	1	
D6517,18	B0JCME000037	DIODE	2	
D6520	MA111	DIODE	1	
D6521	B0ECHP000003	DIODE	1	
D6522	MA111	DIODE	1	
D6523	B0ECHP000003	DIODE	1	
D6524	MA8051L	ZENER DIODE	1	
D6525	MA111	DIODE	1	
D6526	B0HCMM000014	DIODE	1	
D6528	B0ECHP000003	DIODE	1	
D6541	B0HCKS000002	DIODE	1	
D6542	MA111	DIODE	1	
D6543	B0HCKS000002	DIODE	1	
D6544	MA111	DIODE	1	
D6545	MA8051L	ZENER DIODE	1	
D6546-48	MA8330M	ZENER DIODE	3	
D6549,50	MA111	DIODE	2	
D6551	B0HCKS000002	DIODE	1	
D6552	B0JCME000037	DIODE	1	
D6553	MA111	DIODE	1	
D6555	MA8056H	ZENER DIODE	1	
D6556,57	MA111	DIODE	2	
D6570	B0HCMM000014	DIODE	1	
D6572	B0ECHP000003	DIODE	1	
D6582	MA8051L	ZENER DIODE	1	
D6583	LNJ301MPUJA	LED	1	
D6584	MA111	DIODE	1	
D6585,86	MA8330M	ZENER DIODE	2	
D6587	MA8056H	ZENER DIODE	1	
D6600	B0ECHP000003	DIODE	1	
D6602	B0ECHP000003	DIODE	1	
D6604	B0HBSN000008	DIODE	1	
D6608,09	B0HBSN000008	DIODE	2	
D6614	B0HBSN000008	DIODE	1	
D6619,20	B0HBSN000008	DIODE	2	
D6623,24	B0HBSN000008	DIODE	2	
D6625	B0ECHP000003	DIODE	1	
D6627	B0HBSN000008	DIODE	1	
D6650	B0HBSN000008	DIODE	1	
D6651	B0ECHP000003	DIODE	1	
D6661,62	B0ECHP000003	DIODE	2	
D6901,02	MA8056H	ZENER DIODE	2	
D6903,04	B0ECHP000003	DIODE	2	
D6961,62	MA8056H	ZENER DIODE	2	
D6963,64	B0ECHP000003	DIODE	2	
D7101-08	B0HCMM000014	DIODE	8	
D7201-08	B0HCMM000014	DIODE	8	
D7301-08	B0HCMM000014	DIODE	8	
D7401-08	B0HCMM000014	DIODE	8	
D9000-02	MA3033	ZENER DIODE	3	
D9011,12	MA728	DIODE	2	
D9015,16	MA152K	DIODE	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D9700,01	MA728	DIODE	2	
D9800,01	MA152K	DIODE	2	
D9900,01	MA152K	DIODE	2	
FL7101	J0HABH000013	LC FILTER	1	
FL7201	J0HABH000013	LC FILTER	1	
FL7301	J0HABH000013	LC FILTER	1	
FL7401	J0HABH000013	LC FILTER	1	
FL9000-04	J0HABH000013	LC FILTER	5	
FL9300-02	J0HABH000013	LC FILTER	3	
FL9701,02	J0HABH000012	LC FILTER	2	
FL9703,04	J0HABH000013	LC FILTER	2	
FL9800,01	J0HABH000013	LC FILTER	2	
FL9900,01	J0HABH000013	LC FILTER	2	
IC6101-04	C0ZBZ0000895	IC	4	
IC6106	C0JBAZ000005	IC	1	
IC6107	NJM2903M	INTEGRATED CIRCUIT	1	
IC6109	AN1431M	LINEAR IC	1	
IC6431	AN1431M	LINEAR IC	1	
IC6451	C0CBALC00010	IC	1	
IC6452	AN1431M	LINEAR IC	1	
IC6453	C0CBALC00010	IC	1	
IC6454,55	C0CBADC00075	IC	2	
IC6471,72	AN1431M	LINEAR IC	2	
IC6491	AN1431M	LINEAR IC	1	
IC6500	C0JBAZ000994	IC	1	
IC6509	C0JBAZ000994	IC	1	
IC6511	C0ZBZ0001033	IC	1	
IC6512	C0CBADC00075	IC	1	
IC6521	C0ZBZ0001033	IC	1	
IC6541,42	C0ZBZ0001033	IC	2	
IC6543	C0CBADC00075	IC	1	
IC6544	C0ZBZ0001033	IC	1	
IC6581	NJM2903M	INTEGRATED CIRCUIT	1	
IC6601-03	C0ZBZ0000895	IC	3	
IC6604	C0JBAA000174	IC	1	
IC6605,06	C0JBAZ000005	IC	2	
IC6901-06	AN16042A-VT	IC	6	
IC6957-62	AN16042A-VT	IC	6	
IC7101-04	C0JBAZ001120	IC	4	
IC7201-04	C0JBAZ001120	IC	4	
IC7301-04	C0JBAZ001120	IC	4	
IC7401-04	C0JBAZ001120	IC	4	
IC9001	TVRN578-1	IC	1	
IC9003	TVRN680-1	IC	1	
IC9004	C0EBE0000120	IC	1	
IC9005,06	C0JBAZ000856	IC	2	
IC9007	TVRN581-2	IC	1	
IC9008	C0DBEJG00001	IC	1	
IC9200	C1ZBZ0002769	IC	1	
IC9300	MN84512-A	IC	1	
IC9301	PST9128NR	IC (LOGIC)	1	
IC9302	C3ABQJ000031	IC	1	
IC9303	TVRN583-1	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC9500	C1ZBZ0002599	IC	1	
IC9502	C0JBAZ000856	IC	1	
IC9504	C0JBAZ000856	IC	1	
IC9700	C0DBEJG00001	IC	1	
IC9702	C0DBAZH00020	IC	1	
JS6001,02	ERJ6GEY0R00	M 0 OHM, 1/10W	2	
JS6100	ERD25V0T	M OHM, 1/10W	1	
JS6534	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
JS6649	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
L6101-03	G0AR60MA0003	CHOKE COIL	3	
L6104-06	G0A1R4MA0003	CHOKE COIL	3	
L6107,08	J0JJC0000021	CHIP INDUCTOR	2	
L6113	G0ZZ00002183	PEAKING COIL	1	
L6114	G0C101K00023	PEAKING COIL	1	
L6115-17	G0ZZ00002183	PEAKING COIL	3	
L6119,20	G0ZZ00002183	PEAKING COIL	2	
L6122	G0ZZ00002183	PEAKING COIL	1	
L6124	G0ZZ00002183	PEAKING COIL	1	
L6130	G0ZZ00002183	PEAKING COIL	1	
L6132	G0ZZ00002183	PEAKING COIL	1	
L6134	G0ZZ00002183	PEAKING COIL	1	
L6136	G0ZZ00002183	PEAKING COIL	1	
L6152-57	G0ZZ00002183	PEAKING COIL	6	
L6158,59	J0JJC0000021	CHIP INDUCTOR	2	
L6161,62	J0JJC0000011	CHIP INDUCTOR	2	
L6431	J0JJC0000021	CHIP INDUCTOR	1	
L6451	J0JJC0000021	CHIP INDUCTOR	1	
L6471	J0JJC0000021	CHIP INDUCTOR	1	
L6472,73	G0ZZ00002183	PEAKING COIL	2	
L6603,04	G0ZZ00002183	PEAKING COIL	2	
L6607	J0JJC0000021	CHIP INDUCTOR	1	
L6609	G0ZZ00002183	PEAKING COIL	1	
L6611-13	G0AR60MA0003	CHOKE COIL	3	
L6615-17	G0A1R4MA0003	CHOKE COIL	3	
L6618	G0ZZ00002183	PEAKING COIL	1	
L6621,22	G0ZZ00002183	PEAKING COIL	2	
L6625	G0ZZ00002183	PEAKING COIL	1	
L6631,32	G0ZZ00002183	PEAKING COIL	2	
L6635,36	G0ZZ00002183	PEAKING COIL	2	
L6644,45	G0ZZ00002183	PEAKING COIL	2	
L6647,48	G0ZZ00002183	PEAKING COIL	2	
L6650,51	G0ZZ00002183	PEAKING COIL	2	
L6661,62	J0JJC0000011	CHIP INDUCTOR	2	
L9200	G1C150KA0038	INDUCTION COIL	1	
L9500,01	J0JHC0000078	CHIP INDUCTOR	2	
L9700	G1C4R3M00003	CHIP INDUCTOR	1	
L9701	G1C6R8M00009	CHIP INDUCTOR	1	
PC6434	B3PBA0000223	IC	1	
PC6458	B3PBA0000223	IC	1	
PC6467	B3PBA0000223	IC	1	
PC6469	B3PBA0000223	IC	1	
PC6474	B3PBA0000223	IC	1	
PC6480	B3PBA0000223	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PC6501,02	B3PBA0000234	IC	2	
PC6503	B3PBA0000233	IC	1	
PC6505	B3PBA0000233	IC	1	
PC6507	B3PBA0000233	IC	1	
Q6001	2SK3997000VE	FET	1	
Q6005	2SK3999000VH	FET	1	
Q6010-12	B1JADN000001	TRANSISTOR	3	
Q6101	B1ABNF000006	TRANSISTOR	1	
Q6102	B1ADNF000006	TRANSISTOR	1	
Q6115-17	B1JADN000001	TRANSISTOR	3	
Q6127,28	B1DFKM000002	TRANSISTOR	2	
Q6132	B1ABNF000006	TRANSISTOR	1	
Q6133	B1ADNF000006	TRANSISTOR	1	
Q6134	B1ABNF000006	TRANSISTOR	1	
Q6135	B1ADNF000006	TRANSISTOR	1	
Q6138	2SC1473A	TRANSISTOR	1	
Q6141	2SD601A	TRANSISTOR	1	
Q6144	B1ABNF000006	TRANSISTOR	1	
Q6145	B1ADNF000006	TRANSISTOR	1	
Q6431	B1BBCJ000004	TRANSISTOR	1	
Q6432	2SB0709A	TRANSISTOR	1	
Q6435	2SD601A	TRANSISTOR	1	
Q6451	2SD1263A	TRANSISTOR	1	
Q6455	2SD814A	TRANSISTOR	1	
Q6471	B1BAEJ000014	TRANSISTOR	1	
Q6472	2SB0709A	TRANSISTOR	1	
Q6474	2SD814A	TRANSISTOR	1	
Q6475-77	2SD601A	TRANSISTOR	3	
Q6491	2SD1263A	TRANSISTOR	1	
Q6492	2SC1473A	TRANSISTOR	1	
Q6501-05	2SK620	FET	5	
Q6511,12	B1DFFM000003	TRANSISTOR	2	
Q6520	2SD601A	TRANSISTOR	1	
Q6521	B1DFES000002	TRANSISTOR	1	
Q6523	B1ADNF000006	TRANSISTOR	1	
Q6524,25	B1ABNF000006	TRANSISTOR	2	
Q6526	B1ADNF000006	TRANSISTOR	1	
Q6530-40	B1DFHN000001	TRANSISTOR	11	
Q6551	2SD601A	TRANSISTOR	1	
Q6552	B1DEET000002	TRANSISTOR	1	
Q6554	2SD601A	TRANSISTOR	1	
Q6560-68	B1DFKM000002	TRANSISTOR	9	
Q6581	2SD601A	TRANSISTOR	1	
Q6582,83	B1DFET000001	TRANSISTOR	2	
Q6586	B1ADNF000006	TRANSISTOR	1	
Q6601-03	B1JADN000001	TRANSISTOR	3	
Q6608	B1ABNF000006	TRANSISTOR	1	
Q6609	B1ADNF000006	TRANSISTOR	1	
Q6611-13	B1JADN000001	TRANSISTOR	3	
Q6619	B1ABNF000006	TRANSISTOR	1	
Q6620	B1ADNF000006	TRANSISTOR	1	
Q6627	B1ABNF000006	TRANSISTOR	1	
Q6628	B1ADNF000006	TRANSISTOR	1	
Q6629	B1ABNF000006	TRANSISTOR	1	
Q6630	B1ADNF000006	TRANSISTOR	1	
Q6634	2SK3997000VE	FET	1	
Q6639,40	2SK620	FET	2	
Q6649	2SK3999000VH	FET	1	
Q6731	2SD1263A	TRANSISTOR	1	
Q9000,01	2SD601A	TRANSISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q9003	B1DHCC000034	TRANSISTOR	1	
Q9004	2SB709A	TRANSISTOR	1	
Q9008,09	2SK2731T146	FET	2	
Q9010,11	2SD601A	TRANSISTOR	2	
Q9012,13	2SK2731T146	FET	2	
Q9020-23	2SD601A	TRANSISTOR	4	
Q9500	2SK2731T146	FET	1	
Q9700	2SD601A	TRANSISTOR	1	
Q9701,02	B1MBCDA00002	TRANSISTOR	2	
Q9703,04	2SD601A	TRANSISTOR	2	
Q9800,01	2SD601A	TRANSISTOR	2	
Q9900,01	2SD601A	TRANSISTOR	2	
R6002,03	ERJ14YJ5R6U	M 6.2OHM, 1/4W	2	
R6005,06	ERJ14YJ5R6U	M 6.2OHM, 1/4W	2	
R6020-25	ERJ14YJ150U	M 15 OHM, J,1/4W	6	
R6081-83	ERJ6ENF8202	M 82KOHM, 1/10W	3	
R6100,01	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	
R6102	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6106-11	ERJ14YJ150U	M 15 OHM, J,1/4W	6	
R6112	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6113	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6114,15	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	
R6116	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6117-20	ERJ6GEY0R00	M 0 OHM, 1/10W	4	
R6121,22	ERJ6GEYJ151	M 150 OHM,J,1/10W	2	
R6123	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6124-27	ERJ6GEYJ101	M 100 OHM,J,1/10W	4	
R6129	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6134	ERG2FJS221D	M 220 OHM, J, 2W	1	
R6135	ERG1FJS472D	M 4.7KOHM, J, 1W	1	
R6136	ERG2FJS123D	M 12KOHM, J, 2W	1	
R6140	ERJ6GEYJ203	M 20KOHM,J,1/10W	1	
R6141	ERJ6GEYJ243	M 24KOHM,J,1/10W	1	
R6142	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6144	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R6145	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6147	ERJ6ENF1201	M 1.2KOHM, 1/10W	1	
R6148,49	ERJ6GEYJ104	M 100KOHM,J,1/10W	2	
R6150	ERJ6GEYJ243	M 24KOHM,J,1/10W	1	
R6151	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6152,53	ERJ6ENF3902	M 39KOHM, 1/10W	2	
R6154	ERJ6ENF7501	M 7.5KOHM, 1/10W	1	
R6155,56	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	2	
R6157	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6158	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6159	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6160	EXB38V470J	RESISTOR ARRAY	1	
R6161	EXB38V472J	RESISTOR ARRAY	1	
R6162	EXB38V470J	RESISTOR ARRAY	1	
R6163	EXB38V472J	RESISTOR ARRAY	1	
R6164,65	ERJ6GEYJ224	M 220KOHM,J,1/10W	2	
R6166,67	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6171,72	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6175	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6176,77	ERX2FJSR22D	M0.22 OHM, J, 2W	2	
R6181	ERG2FJS221D	M 220 OHM, J, 2W	1	
R6183	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6187	ERX2FJSR22D	M0.22 OHM, J, 2W	1	
R6188	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6189	ERX2FJSR22D	M0.22 OHM, J, 2W	1	
R6191	ERX2FJSR22D	M0.22 OHM, J, 2W	1	
R6193	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6195	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6197	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6198,99	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6214	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6431,32	ERJ12YJ1R0	M 1 OHM, J,1/2W	2	
R6433	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6434	ERDS1FJ221	C 220 OHM, J,1/2W	1	
R6435	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	1	
R6436	ERJ6ENF1543	M 154KOHM, 1/10W	1	
R6437	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R6438	ERJ6ENF2202	M 2.2KOHM, 1/10W	1	
R6439-41	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	3	
R6442	ERJ6ENF9531	M9.53KOHM, 1/10W	1	
R6443	ERJ6ENF2491	M2.49KOHM, 1/10W	1	
R6444,45	ERJ6GEYJ563	M 56KOHM,J,1/10W	2	
R6446	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6448	ERJ6ENF9101	M 9.1KOHM, 1/10W	1	
R6450,51	ERX1FJSR22D	M0.22 OHM, J, 1W	2	
R6452	ERJ12YJ153U	M 15KOHM, 1/2W	1	
R6453	ERJ6GEYJ513	M 51KOHM,J,1/10W	1	
R6454	ERJ6GEYJ151	M 150 OHM,J,1/10W	1	
R6455	ERJ14YJ433U	M 43KOHM, 1/2W	1	
R6456	ERJ6ENF6202	M 62KOHM, 1/10W	1	
R6457,58	ERJ6ENF2491	M2.49KOHM, 1/10W	2	
R6459	ERG2FJS101D	M 100 OHM, J, 2W	1	
R6460,61	ERJ6GEYJ513	M 51KOHM,J,1/10W	2	
R6464	ERJ6ENF6202	M 62KOHM, 1/10W	1	
R6465	ERG3FNJS8R2E	M 8.2 OHM, J, 3W	1	
R6466	ERJ6GEYJ223	M 22KOHM,J,1/10W	1	
R6467	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	1	
R6468	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6469	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	1	
R6470	ERJ14YJ203U	M 20KOHM, 1/2W	1	
R6472	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R6473	ERJ6GEYJ223	M 22KOHM,J,1/10W	1	
R6474	ERG2FJS680D	M 680 OHM, J, 2W	1	
R6475	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	1	
R6476	ERJ6ENF2403	M 240KOHM, 1/10W	1	
R6478	ERJ6ENF5601	M 5.6KOHM, 1/10W	1	
R6479	ERJ6GEYJ513	M 51KOHM,J,1/10W	1	
R6480	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6481	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	1	
R6482	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6483	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	1	
R6484	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6485,86	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6487	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6488	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6489	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6491	ERJ12YJ104U	M 100KOHM, 1/2W	1	
R6492	ERJ6ENF2153	M 215KOHM, 1/10W	1	
R6493	ERJ6ENF2703	M 270KOHM, 1/10W	1	
R6494	ERJ6ENF1432	M14.3KOHM, 1/10W	1	
R6495	ERJ6ENF5231	M5.23KOHM, 1/10W	1	
R6496	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R6497	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6498,99	ERG2FNJS8R2E	M 8.2 OHM, J, 2W	2	
R6500	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	1	
R6501-09	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	9	
R6510	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6511,12	ERX3FJS2R2D	M 2.2 OHM, J, 3W	2	
R6513	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6514	ERJ6GEYJ471	M 470 OHM,J,1/10W	1	
R6515	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6516	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6517	ERJ6GEYJ471	M 470 OHM,J,1/10W	1	
R6518	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6519	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6520	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6521	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6522	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6523	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6524	ERJ6ENF5621	M5.62KOHM, 1/10W	1	
R6525	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R6526	ERJ6GEYJ470	M 47 OHM,J,1/10W	1	
R6527	ERJ14YJ102	M 1KOHM, J,1/4W	1	
R6528	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R6529	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6530-40	ERJ6GEYJ470	M 47 OHM,J,1/10W	11	
R6542	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6543	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R6544	ERJ6GEYJ470	M 47 OHM,J,1/10W	1	
R6545	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6546	ERJ6GEYJ470	M 47 OHM,J,1/10W	1	
R6547,48	ERJ6GEYJ5R6	M 5.6 OHM,J,1/10W	2	
R6549	ERJ6GEYJ151	M 150 OHM,J,1/10W	1	
R6550	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6551	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6552	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6553	ERJ6GEYJ151	M 150 OHM,J,1/10W	1	
R6554,55	ERJ6GEYJ104	M 100KOHM,J,1/10W	2	
R6556	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6557	ERJ6GEYJ470	M 47 OHM,J,1/10W	1	
R6558	ERJ6ENF5621	M5.62KOHM, 1/10W	1	
R6559	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6560-68	ERJ6GEYJ100	M 10 OHM,J,1/10W	9	
R6570	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6571-78	ERJ6GEYJ471	M 470 OHM,J,1/10W	8	
R6579	ERJ6GEYJ151	M 150 OHM,J,1/10W	1	
R6580	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6581	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6582,83	ERJ6ENF3902	M 39KOHM, 1/10W	2	
R6584	ERJ6ENF7501	M 7.5KOHM, 1/10W	1	
R6585,86	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	2	
R6587	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6588	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6589	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6590,91	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	
R6592,93	ERJ6GEYJ105	M 1MOHM,J,1/10W	2	
R6594	ERG1FJS104D	M 100KOHM, J, 1W	1	
R6595-98	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	4	
R6599	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6600	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6602	ERG1FJS471D	M 470 OHM, J, 1W	1	
R6603	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6604	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6605-07	ERJ6GEYJ224	M 220KOHM,J,1/10W	3	
R6608	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6609,10	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6611-16	ERJ14YJ150U	M 15 OHM, J,1/4W	6	
R6625-30	ERJ14YJ150U	M 15 OHM, J,1/4W	6	
R6633	ERJ6GEYJ151	M 150 OHM,J,1/10W	1	
R6634,35	ERJ6GEY0R00	M 0 OHM, 1/10W	2	
R6636-38	ERJ6GEYJ151	M 150 OHM,J,1/10W	3	
R6639	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6640	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6641,42	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	
R6643	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R6644	ERJ6GEYJ100	M 10 OHM,J,1/10W	1	
R6645,46	ERJ6GEYJ101	M 100 OHM,J,1/10W	2	
R6647	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6648-50	ERJ6GEYJ102	M 1KOHM,J,1/10W	3	
R6651	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6654,55	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6657-59	ERJ6GEYJ102	M 1KOHM,J,1/10W	3	
R6660	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6663,64	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R6665	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	1	
R6666-69	ERJ6GEYJ104	M 100KOHM,J,1/10W	4	
R6670,71	ERJ6GEYJ154	M 150KOHM,J,1/10W	2	
R6672	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R6675,76	ERJ6GEYJ224	M 220KOHM,J,1/10W	2	
R6677	ERG1FJS101D	M 100 OHM, J, 1W	1	
R6687,88	ERX2FJSR22D	M0.22 OHM, J, 2W	2	
R6691	EXB38V470J	RESISTOR ARRAY	1	
R6692	EXB38V472J	RESISTOR ARRAY	1	
R6693	EXB38V470J	RESISTOR ARRAY	1	
R6694	EXB38V472J	RESISTOR ARRAY	1	
R6695	EXB38V470J	RESISTOR ARRAY	1	
R6696	EXB38V472J	RESISTOR ARRAY	1	
R6697	EXB38V470J	RESISTOR ARRAY	1	
R6698	EXB38V472J	RESISTOR ARRAY	1	
R6701-03	ERJ6ENF8202	M 82KOHM, 1/10W	3	
R6801,02	EXB38V680J	RESISTOR ARRAY	2	
R6815	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R6828,29	ERJ14YJ5R6U	M 6.2OHM, 1/4W	2	
R6852,53	ERJ14YJ5R6U	M 6.2OHM, 1/4W	2	
R6901	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6902-06	ERJ6GEYJ221	M 220 OHM,J,1/10W	5	
R6911-14	ERJ6GEYJ103	M 10KOHM,J,1/10W	4	
R6915,16	ERJ6GEYJ224	M 220KOHM,J,1/10W	2	
R6971	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R6972-76	ERJ6GEYJ221	M 220 OHM,J,1/10W	5	
R6981-84	ERJ6GEYJ103	M 10KOHM,J,1/10W	4	
R6985,86	ERJ6GEYJ224	M 220KOHM,J,1/10W	2	
R7100	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7102	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7103	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R7104-07	ERJ12YJ220	M 22 OHM,J, 1/2W	4	
R7108,09	ERJ6GEY0R00	M 0 OHM, 1/10W	2	
R7111	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7114-19	EXB38V470J	RESISTOR ARRAY	6	
R7120	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7122	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7123	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R7124	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R7125-27	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7128	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7129	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7131	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7132-35	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R7137	ERJ6GEYJ224	M 220KOHM,J,1/10W	1	
R7140	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7142	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7143	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7145-47	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7148	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7149	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7151-57	TAJAAH0470JV	M 47 OHM,J,1/16W	7	
R7158	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R7160	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7162	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7163	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R7165-67	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7168	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7169	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7171	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7172,73	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7174-79	EXB38V431J	RESISTOR ARRAY	6	
R7200	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7202	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7205-07	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7208	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7209	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7211	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7212,13	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7214-19	TAJAAH0470JV	M 47 OHM,J,1/16W	6	
R7220	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7222	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7224	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7225-27	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7228	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7229	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7231	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7232-37	EXB38V470J	RESISTOR ARRAY	6	
R7238	ERJ6GEYJ224	M 220KOHM,J,1/10W	1	
R7240	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7242	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7244	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7245-47	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7248	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7249	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7251	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7252	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R7253	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R7254-57	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R7260	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7262	TAJAAH0470JV	M 47 OHM,J,1/16W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7265-67	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7268	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7269	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7271	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7272,73	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7274	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R7275-80	EXB38V431J	RESISTOR ARRAY	6	
R7300	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7301,02	EXB38V470J	RESISTOR ARRAY	2	
R7303	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7305-07	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7308	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7309	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7310	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R7311	EXB38V470J	RESISTOR ARRAY	1	
R7312	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7314-17	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R7318	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R7319	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R7320	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7321,22	EXB38V470J	RESISTOR ARRAY	2	
R7323	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7325-27	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7328	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7329	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7330	EXB38V470J	RESISTOR ARRAY	1	
R7331	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7332	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7339	ERJ6GEYJ224	M 220KOHM,J,1/10W	1	
R7340	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7341,42	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7343	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7345-47	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7348	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7349	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7350-52	TAJAAH0470JV	M 47 OHM,J,1/16W	3	
R7354-57	TAJAAH0470JV	M 47 OHM,J,1/16W	4	
R7358,59	ERJ6GEY0R00	M 0 OHM, 1/10W	2	
R7360	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7363	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7365-67	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7368	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7369	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7370,71	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7372	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7400	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7401	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7403	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7405-07	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7408	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7409	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7410	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R7412	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7414-17	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R7418	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R7419	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R7420	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7423	TAJAAH0470JV	M 47 OHM,J,1/16W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7425-27	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7428	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7429	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7430	ERJ6GEYJ224	M 220KOHM,J,1/10W	1	
R7432	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7434-39	EXB38V470J	RESISTOR ARRAY	6	
R7440	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7441	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7443	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7445-47	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7448	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7449	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7452	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7460	ERJ8GEY0R00	M 0 OHM, 1/8W	1	
R7463	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7465-67	ERJ12YJ220	M 22 OHM,J, 1/2W	3	
R7468	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R7469	ERJ12YJ220	M 22 OHM,J, 1/2W	1	
R7470,71	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R7472	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R7483-88	TAJAAH0470JV	M 47 OHM,J,1/16W	6	
R7489,90	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R9000	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9002	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9004	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9006	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9007	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R9009	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9010	EXB2HV272JV	RESISTOR ARRAY	1	
R9012	EXB2HV272JV	RESISTOR ARRAY	1	
R9013	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9015-18	ERJ3GEYJ103	M 10KOHM,J,1/16W	4	
R9019	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9020,21	ERJ3GEYJ102	M 1KOHM,J,1/16W	2	
R9022	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R9023	ERJ6ENF1601	M 1.6KOHM, 1/10W	1	
R9024	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R9026	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
R9028	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	1	
R9029,30	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9031,32	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	2	
R9033,34	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9035,36	ERJ6GEY0R00	M 0 OHM, 1/10W	2	
R9039	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9040	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
R9041	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9042	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R9043,44	TAJAAH0101JV	M 100 OHM,J,1/16W	2	
R9045	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R9046	ERJ3GEYJ123	M 12KOHM,J,1/16W	1	
R9047-50	TAJAAH0101JV	M 100 OHM,J,1/16W	4	
R9052	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9053	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9054,55	ERJ3GEYJ272	M 2.7KOHM,J,1/16W	2	
R9056,57	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9058,59	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	2	
R9060-67	TAJAAH0101JV	M 100 OHM,J,1/16W	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R9068-72	ERJ3GEYJ103	M 10KOHM,J,1/16W	5	
R9073	EXB2HV470JV	RESISTOR ARRAY	1	
R9074	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9075	EXB2HV470JV	RESISTOR ARRAY	1	
R9076	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9077-79	ERJ3GEY0R00	M 0 OHM, 1/16W	3	
R9080	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R9081	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9082-89	TAJAAH0101JV	M 100 OHM,J,1/16W	8	
R9090	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	1	
R9091,92	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9093	ERJ3GEYJ473	M 47KOHM,J,1/16W	1	
R9094	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R9095-98	ERJ3GEYJ103	M 10KOHM,J,1/16W	4	
R9101-04	TAJAAH0101JV	M 100 OHM,J,1/16W	4	
R9107-09	ERJ3GEYJ393	M 39KOHM,J,1/16W	3	
R9110	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9111,12	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R9113	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9114-16	ERJ3GEY0R00	M 0 OHM, 1/16W	3	
R9117,18	EXB38VR000	RESISTOR ARRAY	2	
R9119	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9120,21	TAJAAH0101JV	M 100 OHM,J,1/16W	2	
R9122-24	ERJ3GEYJ103	M 10KOHM,J,1/16W	3	
R9125,26	ERJ3GEYJ102	M 1KOHM,J,1/16W	2	
R9127,28	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9131-33	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	3	
R9134-36	TAJAAH0101JV	M 100 OHM,J,1/16W	3	
R9137	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9140-42	ERJ3GEYJ103	M 10KOHM,J,1/16W	3	
R9145-47	ERJ3GEYJ103	M 10KOHM,J,1/16W	3	
R9148	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9149	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R9152,53	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	2	
R9155	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R9156,57	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	2	
R9158-60	ERJ3GEY0R00	M 0 OHM, 1/16W	3	
R9162,63	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R9200-02	TAJAAH0470JV	M 47 OHM,J,1/16W	3	
R9204	TAJAAH0470JV	M 47 OHM,J,1/16W	1	
R9206,07	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9210	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9212	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9300-04	D1HG33080001	NETWORK RESISTER	5	
R9305	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9306,07	D1HG33080001	NETWORK RESISTER	2	
R9308	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R9309	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9313-16	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R9318,19	ERJ3GEY0R00	M 0 OHM, 1/16W	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R9321	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R9322	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9323	ERJ3GEYJ102	M 1KOHM,J,1/16W	1	
R9324-28	ERJ3GEY0R00	M 0 OHM, 1/16W	5	
R9329	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9330-33	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R9335,36	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	2	
R9337	ERJ6ENF1101	M 1.1KOHM, 1/10W	1	
R9338	ERJ6ENF1401	M 1.4KOHM, 1/10W	1	
R9339-42	ERJ6ENF1001	M 1KOHM, 1/10W	4	
R9343-46	ERJ3GEY0R00	M 0 OHM, 1/16W	4	
R9500-03	ERJ3GEYJ103	M 10KOHM,J,1/16W	4	
R9505-10	TAJAAH0101JV	M 100 OHM,J,1/16W	6	
R9511	EXB2HV272JV	RESISTOR ARRAY	1	
R9512	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9515	EXB2HV272JV	RESISTOR ARRAY	1	
R9516,17	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9518	EXB2HV470JV	RESISTOR ARRAY	1	
R9519-21	EXB38V470J	RESISTOR ARRAY	3	
R9522,23	EXB2HV470JV	RESISTOR ARRAY	2	
R9524-26	TAJAAH0470JV	M 47 OHM,J,1/16W	3	
R9527	EXB38V470J	RESISTOR ARRAY	1	
R9528,29	TAJAAH0470JV	M 47 OHM,J,1/16W	2	
R9531	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9533	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9536	TAJAAH0680JV	M 68 OHM,J,1/16W	1	
R9537,38	ERJ3GEYJ103	M 10KOHM,J,1/16W	2	
R9540	ERJ3GEYJ304V	M 300KOHM,J,1/16W	1	
R9543	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9547-51	ERJ3GEY0R00	M 0 OHM, 1/16W	5	
R9553-55	ERJ3GEYJ103	M 10KOHM,J,1/16W	3	
R9700	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9702-04	ERJ3GEYJ103	M 10KOHM,J,1/16W	3	
R9706,07	ERJ6ENF1001	M 1KOHM, 1/10W	2	
R9708	ERJ6GEY0R00	M 0 OHM, 1/10W	1	
R9709	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9714	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R9716,17	ERJL14KJ33M	M 33 OHM, J,1/4W	2	
R9718	ERJ6ENF2002	M 20KOHM, 1/10W	1	
R9719	ERJ6ENF1742	M17.4KOHM, 1/10W	1	
R9720	ERJ6ENF6342	M6.34KOHM, 1/10W	1	
R9721	ERJ6ENF2002	M 20KOHM, 1/10W	1	
R9722,23	ERJ3GEYJ100	M 10 OHM,J,1/16W	2	
R9724	TAJAAH0101JV	M 100 OHM,J,1/16W	1	
R9725	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R9726,27	ERJ3GEYJ100	M 10 OHM,J,1/16W	2	
R9728,29	ERJ6ENF2002	M 20KOHM, 1/10W	2	
R9738,39	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R9740-43	ERJ6GEY0R00	M 0 OHM, 1/10W	4	
R9800	EXB38V470J	RESISTOR ARRAY	1	
R9802-04	EXB2HV470JV	RESISTOR ARRAY	3	
R9806,07	EXB38V470J	RESISTOR ARRAY	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R9808,09	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9810	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9811	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9812	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R9813	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9814	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9815	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R9816,17	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9819	EXB2HV470JV	RESISTOR ARRAY	1	
R9820,21	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9822,23	EXB2HV470JV	RESISTOR ARRAY	2	
R9824	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9830	EXB2HV470JV	RESISTOR ARRAY	1	
R9836-43	EXB2HVR000	RESISTOR ARRAY	8	
R9900	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9901	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9902	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R9903	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R9904	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
R9905	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R9906	EXB2HV470JV	RESISTOR ARRAY	1	
R9907	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R9908,09	EXB38V470J	RESISTOR ARRAY	2	
R9910,11	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9912	EXB2HV470JV	RESISTOR ARRAY	1	
R9913	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R9914	EXB38V470J	RESISTOR ARRAY	1	
R9915,16	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R9917-19	EXB2HV470JV	RESISTOR ARRAY	3	
R9922	EXB2HV470JV	RESISTOR ARRAY	1	
R9923	ERJ3GEYJ103	M 10KOHM,J,1/16W	1	
RTL	TNPA3553AB	CIRCUIT BOARD C1	1	⚠
RTL	TNPA3554AB	CIRCUIT BOARD C2	1	⚠
RTL	TNPA3555	CIRCUIT BOARD C3	1	⚠
RTL	TNPA3556	CIRCUIT BOARD C4	1	⚠
RTL	TZTNP01YJSR	CIRCUIT BOARD D	1	⚠
RTL	ETXMM563MDK	CIRCUIT BOARD P	1	⚠
RTL	TNPA3557	CIRCUIT BOARD SC	1	⚠
RTL	TNPA3190AB	CIRCUIT BOARD SD	1	⚠
RTL	TNPA3558	CIRCUIT BOARD SS	1	⚠
RTL	TNPA3675	CIRCUIT BOARD SS2	1	⚠
RTL	TNPA3676	CIRCUIT BOARD SS3	1	⚠
RTL	TNPA3189AB	CIRCUIT BOARD SU	1	⚠
SC2	K1KA06AA0192	6P CONNECTOR	1	
SC20	K1KA20AA0008	20P CONNECTOR	1	
SC23	K1KA03AA0193	3P CONNECTOR	1	
SC41,42	K1ML80B00001	80P CONNECTOR	2	
SC45,46	K1KA10A00431	10P CONNECTOR	2	
SC90	K1KA06AA0192	6P CONNECTOR	1	
SD1-D4	K1MN96B00004	96P CONNECTOR	4	
SD46	K1KA10B00209	10P CONNECTOR	1	
SS11	K1KA07AA0192	7P CONNECTOR	1	
SS12	K1KA10AA0194	10P CONNECTOR	1	
SS20,21	K1KA07A00170	7P CONNECTOR	2	
SS22,23	K1KB07AA0087	7P CONNECTOR	2	
SS24	K1KA04AA0193	4P CONNECTOR	1	
SS32	K1KA12AA0194	12P CONNECTOR	1	
SS34	K1KA03AA0193	3P CONNECTOR	1	
SS52,53	K1MN13B00020	13P CONNECTOR	2	
SS55,56	K1MN13B00020	13P CONNECTOR	2	
SU1-U4	K1MN96B00004	96P CONNECTOR	4	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
SU45	K1KA10B00209	10P CONNECTOR	1	
T6431	ETS13TB139AP	SWITCHING TRANS	1	
T6471	ETS22AE2F9AC	SWITCHING TRANS	1	
VR6145	EVMEASA00B14	CONTROL 10KOHMB 0.3W	1	
VR6477	EVMEASA00B13	CONTROL 1KOHMB 0.3W	1	
VR6523	EVMEASA00B53	CONTROL 5KOHMB 0.3W	1	
VR6557	EVMEASA00B14	CONTROL 10KOHMB 0.3W	1	
X9000	H2D2705A0004	CRYSTAL	1	
X9200	H0J200500038	CRYSTAL	1	
ZA6101-03	K4CD01000013	TERMINAL	3	
ZA6401-03	K4CD01000013	TERMINAL	3	
ZA7101-03	K4CD01000013	TERMINAL	3	
ZA7201-03	K4CD01000013	TERMINAL	3	
ZA7301-03	K4CD01000013	TERMINAL	3	
ZA7401-03	K4CD01000013	TERMINAL	3	
ZA9001	K4CD01000013	TERMINAL	1	
D305,06	ST3D170	CLAMPER	2	
D501	ST3D200	CLAMPER	1	
A601,02	RA362MSV7T	ARRESTOR	2	
C301	RR3AD681KP	CERAMIC CAPACITOR	1	
C302	ECJ1VB1H472K	C 4700PF, K, 50V	1	
C303	KZE1E470P	ELECTROLYTIC CAPACITOR	1	
C305	ECJ2XC1H101J	C 100PF, J, 50V	1	
C307	TBB224K5	CERAMIC CHIP CAPACITOR	1	
C332	KZE1E470	ELECTROLYTIC CAPACITOR	1	
C335	TEB104K5	CERAMIC CHIP CAPACITOR	1	
C341	RR3AD332K	CERAMIC CAPACITOR	1	
C352	TCR474K2A	CERAMIC CHIP CAPACITOR	1	
C354	TEB104K5	CERAMIC CHIP CAPACITOR	1	
C355	TCR474K2A	CERAMIC CHIP CAPACITOR	1	
C356	TAB473K2E	CERAMIC CHIP CAPACITOR	1	
C359	KZE1E470	ELECTROLYTIC CAPACITOR	1	
C360,61	KMQ220901Z	ELECTROLYTIC CAPACITOR	2	
C363	RR3DD221K	CERAMIC CAPACITOR	1	
C366,67	KZE2A331L	ELECTROLYTIC CAPACITOR	2	
C369	TAB473K2E	CERAMIC CHIP CAPACITOR	1	
C374	RR3DD221K	CERAMIC CAPACITOR	1	
C401	KZE1E470	ELECTROLYTIC CAPACITOR	1	
C410	ECWH8183HVB	PLASTIC FILM CAPACITOR	1	
C411	ECJ3YB1E475K	C 4.7UF, K, 25V	1	
C412	TBB105K1	CERAMIC CHIP CAPACITOR	1	
C451	KZE1E272	ELECTROLYTIC CAPACITOR	1	
C452	KZE1E821L	ELECTROLYTIC CAPACITOR	1	
C454,55	ECJ3YB1E475K	C 4.7UF, K, 25V	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C457	KZE1E821L	ELECTROLYTIC CAPACITOR	1	
C458	ECJ3YB1E475K	C 4.7UF, K, 25V	1	
C459	KZE1E821L	ELECTROLYTIC CAPACITOR	1	
C460	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C461	KZE1E471L	ELECTROLYTIC CAPACITOR	1	
C462	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C463	KZE1E101	ELECTROLYTIC CAPACITOR	1	
C464	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C465	KZE1E101	ELECTROLYTIC CAPACITOR	1	
C466-69	ECJ2FB1H104K	C 0.1UF, K, 50V	4	
C471	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C472	KZE1E470	ELECTROLYTIC CAPACITOR	1	
C501	KMQ2W161K	ELECTROLYTIC CAPACITOR	1	
C502	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C503	TBB106K1A	CERAMIC CHIP CAPACITOR	1	
C507	KZE1E101	ELECTROLYTIC CAPACITOR	1	
C512	KZE1E101	ELECTROLYTIC CAPACITOR	1	
C515	TBB106K1A	CERAMIC CHIP CAPACITOR	1	
C551	KZE1E471L	ELECTROLYTIC CAPACITOR	1	
C553	TBB475K1	CERAMIC CHIP CAPACITOR	1	
C555	KZE1E101	ELECTROLYTIC CAPACITOR	1	
C556	KZE1A471	ELECTROLYTIC CAPACITOR	1	
C557,58	ECJ2FB1H104K	C 0.1UF, K, 50V	2	
C559	CD221K	CERAMIC CAPACITOR	1	
C560	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C562	ECJ2FB1H104K	C 0.1UF, K, 50V	1	
C563	TBB475K1	CERAMIC CHIP CAPACITOR	1	
C601	ECQU2A105ML	PLASTIC FILM CAPACITOR	1	
C603,04	CD221K	CERAMIC CAPACITOR	2	
C606	ECQU2A224ML	PLASTIC FILM CAPACITOR	1	
C610,11	MMXC2W105K	PLASTIC FILM CAPACITOR	2	
C620,21	ECKD3A102KBP	C 1000PF, K, 1KV	2	
C622	ECQE6104KF	P 0.1UF, K,630V	1	
C623,24	KMQ2W161K	ELECTROLYTIC CAPACITOR	2	
C625	TBB474K2	CERAMIC CHIP CAPACITOR	1	
C626	KMQ2W161K	ELECTROLYTIC CAPACITOR	1	
C627	ECQE6472B45	PLASTIC FILM CAPACITOR	1	
C628	CD331K	CERAMIC CAPACITOR	1	
C629	KZE1E470	ELECTROLYTIC CAPACITOR	1	
C630	ECQU2A473MN	P 0.047UF, M,250V	1	
C633	ECUX1H102KBN	C 1000PF, K, 50V	1	
C634	ECJ2FB1E224K	C 22UF, K, 25V	1	
C701	TBB475K1	CERAMIC CHIP CAPACITOR	1	
C703	TEB104K5	CERAMIC CHIP CAPACITOR	1	
C706	ECQV1H104JL	P 0.1UF, J, 50V	1	
C711	TEB104K2	CERAMIC CHIP CAPACITOR	1	
CNPFC	B2P3-VH-B	CONNECTOR	1	
ZD301,02	MA8360	ZENER DIOED	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D302	RU1P	DIODE	1	
ZD303	MA8360	ZENER DIOED	1	
D303	RB550VA-30	DIODE	1	
ZD304-06	MA8360	ZENER DIOED	3	
ZD307	MA8330	ZENER DIODE	1	
D307	RB550VA-30	DIODE	1	
D308	ERA91-02	DIODE	1	
ZD308	MA8330	ZENER DIODE	1	
ZD309	MA4051N	ZENER DIODE	1	
ZD310	MA4020	ZENER DIODE	1	
ZD311,12	MA4270N	ZENER DIODE	2	
D332	RB550VA-30	DIODE	1	
D335	RU1P	DIODE	1	
D351	FCF06A40	DIODE	1	
TH351	PRFCBB471	POSISTOR	1	
D374	MA2C16500H	DIODE	1	
D401	RB550VA-30	DIODE	1	
D402	M1FS6	DIODE	1	
ZD402	PTZ24B	ZENER DIODE	1	
D403	M1FS6	DIODE	1	
ZD403	MA8056	ZENER DIODE	1	MAZ8056
ZD404	MA8360	ZENER DIOED	1	MAZ8360
D405	M1FS6	DIODE	1	
ZD405-09	MA8360	ZENER DIOED	5	MAZ8360
ZD410	MA4220N	ZENER DIODE	1	
ZD413	MA4270N	ZENER DIODE	1	
ZD451	1ZB18	ZENER DIODE	1	
D451-54	RB085T60	DIODE	4	
D455	M1FS6	DIODE	1	
D456,57	MA111	DIODE	2	MA2J111
Z501	ERZVGAD471	VARISTOR	1	
D504	ERA91-02	DIODE	1	B0AAGM000001
ZD510	MA8270	ZENER DIODE	1	
D511	ERA91-02	DIODE	1	B0AAGM000001
D511	MA2S111	DIODE	1	
D515	ERA91-02	DIODE	1	B0AAGM000001
D516	MA2S111	DIODE	1	
D551	RK49	DIODE	1	B0JAPK000005
Z601	ERZVGAD751	VARISTOR	1	
D601	MA111	DIODE	1	MA2J111
ZD601	MA4220N	ZENER DIODE	1	
D602	S1WBA80	DIODE	1	B0EBKT000003
Z603	ERZVGAD471	VARISTOR	1	
D603	MA111	DIODE	1	MA2J111
D605	M1F60	DIODE	1	
D607	S3V60	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D608,09	RB550VA-30	DIODE	2	
D612	EP01C	DIODE	1	B0HADV000013
D613,14	ERA22-10	DIODE	2	B0EAEV000002
ZD668,69	MA8220	ZENER DIODE	2	
D796	MA2S111	DIODE	1	
IC301	MR4020F2	INTEGRATED CIRCUIT	1	
IC401	F9222L	INTEGRATED CIRCUIT	1	
IC501	MIP3E30MP	INTEGRATED CIRCUIT	1	
L301,02	EXCELSR35	FERRITE BEAD INDUCTOR	2	
L401,02	EXCELSA35	BEAD CHOKE	2	
L452	EXCELDR35	FERRITE BEAD INDUCTOR	1	
L454,55	EXCELDR35	FERRITE BEAD INDUCTOR	2	
L501	EXCELSA35	BEAD CHOKE	1	
L503	EXCELDR35	FERRITE BEAD INDUCTOR	1	
L601,02	P2570205Z	FILTER CHOKE	2	
L604	S3783106Z	CHOKE	1	
L606	ELF15N004A	FILTER CHOKE	1	
L607,08	EXCELDR35	FERRITE BEAD INDUCTOR	2	
L612	EXCELDR35	FERRITE BEAD INDUCTOR	1	
L614	EXCELDR35	FERRITE BEAD INDUCTOR	1	
P2	B6B-EH-A	CONNECTOR	1	
P5	B11B-PH-KS	CONNECTOR	1	
P9	B3P4VH-B-L	CONNECTOR	1	
P10	B6B-PH-KS	CONNECTOR	1	
P11	B7B-EH-A	CONNECTOR	1	
P12	B10B-PH-KS	CONNECTOR	1	
P23	B3B-PH-KS	CONNECTOR	1	
P25	B20B-PHDSS	CONNECTOR	1	
P30	B5B-PH-KS	CONNECTOR	1	
Q332	2SD2098	TRANSISTOR	1	
Q333	2SB1386RT100	TRANSISTOR	1	
Q402	2SB766A	TRANSISTOR	1	
Q451-53	HAT1130R	FIELD EFFECT TRANSISTOR	3	
Q551	HAT1130R	FIELD EFFECT TRANSISTOR	1	
Q553,54	HAT1130R	FIELD EFFECT TRANSISTOR	2	
Q555	2SB709A	TRANSISTOR	1	
Q601	2SK3302	FIELD EFFECT TRANSISTOR	1	
Q602	2SD2098	TRANSISTOR	1	
Q603	2SB1386	TRANSISTOR	1	
Q605	2SB709A	TRANSISTOR	1	
Q606	2SD601A	TRANSISTOR	1	
R301	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R308	MPC5WR27KS	METAL PLATE RESISTOR	1	
R311	ERJ6GEYJ2R2	M 2.2 OHM,J,1/10W	1	
R312	ERJ6GEYJ223	M 22KOHM,J,1/10W	1	
R313	ERJ14YJ100	M 10 OHM, J,1/4W	1	
R314	ERJ6GEYJ2R2	M 2.2 OHM,J,1/10W	1	
R321	MPC5WR47KS	METAL PLATE RESISTOR	1	
R323	MPC5WR47KS	METAL PLATE RESISTOR	1	
R325	ERJ6GEYJ333	M 33KOHM,J,1/10W	1	
R326,27	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R336	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R339	ERJ12YJ330	M 33 OHM,J, 1/2W	1	
R340,41	ERJ12YJ333	M 33KOHM,J, 1/2W	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R342	ERJ6ENF1650	M 165 OHM, 1/10W	1	
R343	ERJ12YJ333	M 33KOHM,J, 1/2W	1	
R345	ERJ12YJ333	M 33KOHM,J, 1/2W	1	
R346,47	ERJ12YJ220	M 22 OHM,J, 1/2W	2	
R350,51	ERJ6ENF6192	M61.9KOHM, 1/10W	2	
VR351	EVMEASA00B54	VARIABLE RESISTOR	1	
R352	ERJ6ENF6192	M61.9KOHM, 1/10W	1	
VR352	EVMEASA00B54	VARIABLE RESISTOR	1	
R353	ERJ6ENF6192	M61.9KOHM, 1/10W	1	
R354,55	ERJ6ENF1303	M 130KOHM, 1/10W	2	
R356	ERJ14YJ753	M 75KOHM,J, 1/2W	1	
R358	ERG2SJ150	M 15 OHM, J, 2W	1	
R359	ERJ14YJ753	M 75KOHM,J, 1/2W	1	
R364	ERG2SJ683	M 68KOHM, J, 2W	1	
R365	ERJ3GSYJ332	M 3.3KOHM,J,1/16W	1	
R366,67	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	2	
R368	ERJ6ENF7502	M 75KOHM, 1/10W	1	
R369-71	ERJ6GEYJ823	M 82KOHM,J,1/10W	3	
R373,74	ERJ14YJ753	M 75KOHM,J, 1/2W	2	
R379	ERJ12YJ473	M 47KOHM,J, 1/2W	1	
R381	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R382,83	ERJ6GEYJ333	M 33KOHM,J,1/10W	2	
R384	ERJ6GEYJ393	M 39KOHM,J,1/10W	1	
R386-89	ERJ6ENF1052	M10.5KOHM, 1/10W	4	
R394	ERJ6ENF1052	M10.5KOHM, 1/10W	1	
R395,96	ERJ6GEYJ473	M 47KOHM,J,1/10W	2	
R398,99	ERJ14YJ753	M 75KOHM,J, 1/2W	2	
R401	ERJ3GSYJ103	M 10KOHM,J,1/16W	1	
R405	MPC5WR39KS	METAL PLATE RESISTOR	1	
R406	ERJ6GEYJ223	M 22KOHM,J,1/10W	1	
R407	ERJ14YJ334	M 330KOHM, 1/2W	1	
R408	SG734K271	CHIP RESISTOR	1	
R410	ERJ14YJ332	M 33KOHM, J,1/4W	1	
R411	ERJ6GEYJ104	M 100KOHM,J,1/10W	1	
R412	ERJ14YJ472	M 4.7KOHM,J, 1/2W	1	
R413,14	ERJ14YJ334	M 330KOHM, 1/2W	2	
R415,16	ERJ6GEYJ563	M 56KOHM,J,1/10W	2	
R426	ERJ14YJ470	M 47 OHM,J, 1/2W	1	
R429-31	ERJ6GEYJ563	M 56KOHM,J,1/10W	3	
R432	ERJ6GEYJ4R7	M 4.7 OHM,J,1/10W	1	
VR451	EVMEASA00B53	VARIABLE RESISTOR	1	
R456	ERJ6ENF4302	M 43KOHM, 1/10W	1	
R457,58	ERJ6GEYJ473	M 47KOHM,J,1/10W	2	
R459	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R460	ERG2SJ331	METAL OXIDE RESISTOR	1	
R473	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	1	
R475,76	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
R480	ERG2SJ561	M 560 OHM, J, 2W	1	
R481	ERJ6ENF4302	M 43KOHM, 1/10W	1	
R482	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R508,09	ERJ12YJ100	M 10 OHM,J, 1/2W	2	
R510	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R558	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R559	ERJ12YJ151	M 150 OHM,J, 1/2W	1	
R561	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R562	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	1	
R563	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R564,65	ERJ6GEYJ103	M 10KOHM,J,1/10W	2	
RF601	HUF5K100J14	THERMAL CUTOFF WITH RESISTOR	1	
R602,03	5K150JA	WIREWOUND RESISTOR	2	
R604,05	ERDS1TJ474	C 4.7KOHM, J,1/2W	2	
R606	ERJ6GEYJ102	M 1KOHM,J,1/10W	1	
R607	ERJ6GEYJ334	M 330KOHM,J,1/10W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R608	ERG3FJS820D	M 82 OHM, J, 3W	1	
R609-12	ERJ6ENF1213	M 121KOHM, 1/10W	4	
R613,14	ERJ6GEYJ154	M 150KOHM,J,1/10W	2	
R615-17	MPC5WR27KS	METAL PLATE RESISTOR	3	
R618	ERG3FJS820D	M 82 OHM, J, 3W	1	
R620	ERJ12YJ680	M 68 OHM,J, 1/2W	1	
R621	ERJ12YJ151	M 150 OHM,J, 1/2W	1	
R623	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R624	ERJ6GEYJ183	M 18KOHM,J,1/10W	1	
R625	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R626	ERJ12YJ680	M 68 OHM,J, 1/2W	1	
R627	ERJ12YJ151	M 150 OHM,J, 1/2W	1	
R628	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R629	ERJ6GEYJ473	M 47KOHM,J,1/10W	1	
R630	ERJ6GEYJ103	M 10KOHM,J,1/10W	1	
R632,33	ERJ6GEYJ154	M 150KOHM,J,1/10W	2	
R634-37	ERJ6ENF2553	M 255KOHM, 1/10W	4	
R638	ERJ6ENF2493	M 249KOHM, 1/10W	1	
R640,41	ERJ6ENF5493	M 549KOHM, 1/10W	2	
R642	ERJ6ENF2493	M 249KOHM, 1/10W	1	
R644	ERJ6GEYJ101	M 100 OHM,J,1/10W	1	
R646	ERJ6GEYJ154	M 150KOHM,J,1/10W	1	
R649	ERJ6ENF5493	M 549KOHM, 1/10W	1	
R653-55	ERJ6GEYJ183	M 18KOHM,J,1/10W	3	
R656-59	ERJ6GEYJ824	M 820KOHM,J,1/10W	4	
R681,82	ERJ6GEYJ824	M 820KOHM,J,1/10W	2	
R683	ERC12ZGK185D	S 1.8MOHM, K,1/2W	1	
R717	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R1301,02	ERJ12YJ333	M 33KOHM,J, 1/2W	2	
R1738	ERJ3GSYJ103	M 10KOHM,J,1/16W	1	
RTL	MP44S1	MODULE	1	⚠
RTL	IXMM564M-B-9	MODULE	1	⚠
RTL	IXMM564M-F-9	MODULE	1	⚠
RTL	IXMM564M-C-9	MODULE	1	⚠
RTL	MP00P3	MODULE	1	⚠
RTL	IXMM564M-G-9	MODULE	1	⚠
RTL	IXMM564M-E-9	MODULE	1	⚠
RTL	MP00P5	MODULE	1	⚠
RTL	IXMM564M-D-9	MODULE	1	⚠
K601	DG12D1-0	RELAY	1	
K602	DJ12D2-0	RELAY	1	
T301	ETB28BF1Z1AH	TRANSFORMER	1	
T401	ETB57LZ135AD	TRANSFORMER	1	
T501	ETB25KA1A8AD	TRANSFORMER	1	